GRADE 2

Mathematics

Teacher Toolkit:
CAPS Aligned Lesson Plans and Resources

English / isiXhosa

TERM 2

A MESSAGE FROM THE NECT

NATIONAL EDUCATION COLLABORATION TRUST (NECT)

Dear Teachers

This learning programme and training is provided by the National Education Collaboration Trust (NECT) on behalf of the Department of Basic Education (DBE)! We hope that this programme provides you with additional skills, methodologies and content knowledge that you can use to teach your learners more effectively.

What is NECT?
In 2012 our government launched the National Development Plan (NDP) as a way to eliminate poverty and reduce inequality by the year 2030. Improving education is an important goal in the NDP which states that 90% of learners will pass Maths, Science and languages with at least 50% by 2030. This is a very ambitious goal for the DBE to achieve on its own, so the NECT was established in 2015 to assist in improving education.

The NECT has successfully brought together groups of people interested in education so that we can work collaboratively to improve education. These groups include the teacher unions, businesses, religious groups, trusts, foundations and NGOs.

What are the learning programmes?

One of the programmes that the NECT implements on behalf of the DBE is the 'District Development Programme'. This programme works directly with district officials, principals, teachers, parents and learners; you are all part of this programme! The programme began in 2015 with a small group of schools called the Fresh Start Schools (FSS). Curriculum learning programmes were developed for Maths, Science and Language teachers in FSS who received training and support on their implementation. The FSS teachers remain part of the programme, and we encourage them to mentor and share their experience with other teachers.

The FSS helped the DBE trial the NECT learning programmes so that they could be improved and used by many more teachers. NECT has already begun this scale-up process in its Universalisation Programme and in its Provincialisation Programme.

Everyone using the learning programmes comes from one of these groups; but you are now brought together in the spirit of collaboration that defines the manner in which the NECT works. Teachers with more experience using the learning programmes will deepen their knowledge and understanding, while some teachers will be experiencing the learning programmes for the first time.

Let's work together constructively in the spirit of collaboration so that we can help South Africa eliminate poverty and improve education!

CONTENTS

ABOUT THE LESSON PLANS AND RESOURCES

The lesson plans and resources in this book are part of the Teacher Toolkit for Mathematics Grade 2 Term 2. The other documents in the toolkit are:

- a CAPS aligned Planner, Tracker and Assessment Resources

A variety of printable resources that you can copy for yourself and/or your learners are included at the end of the lesson plans in this book. They include:

a) **Resource sheets:** These comprise a variety of teaching and learning aids that are needed in certain lessons. The specific resource sheet, and the number of copies needed, is noted in the relevant lesson plan and in the tracker so that you can prepare them in advance.
b) **Mental mathematics challenge cards:** A pack of eight mental mathematics challenge cards (solutions are provided) are included to allow for routine weekly mental mathematics activities that you can record.
c) **Enrichment activity cards:** A pack of 32 enrichment activity cards (solutions are provided) are included for learners who complete the day's classwork activities ahead of the class.

A. About the lesson plans

The lesson plans give detailed information about how to teach a CAPS-aligned lesson every day. By following the lesson plans, you will ensure that you cover the content and assessment tasks specified in the curriculum and give your learners the best possible chance of developing the knowledge and skills required for Mathematics in this grade.

1. Curriculum alignment

The lessons are sequenced according to the topics in the CAPS and weighted according to requirements given there, and the programme of assessment is accommodated. Every lesson shows the CAPS content and skill being focussed on in the lesson.

2. Links to the DBE workbooks

Links are given in the lessons to all appropriate DBE worksheets. Note that the pages referred to are all from the 2017 edition of the DBE workbook. This changes very little from year to year, but if you use a different edition of the workbook, you should check that the worksheet on the same page in this different edition is still appropriate for your purpose.

Bilingual learner material is provided in the LoLT of the school in accordance with the Foundation Phase language policy.

3. Broad overview of the content of the lesson plans

Each lesson plan provides a set of steps to guide you in delivering the lesson. In addition, it contains learner activities that will help learners develop the concepts and skills set for the lesson. These include the required daily mental mathematics activity, whole class oral activities led by the teacher, classwork and homework activities, as well as answers for these. All the classwork and homework activities are given in the lesson plans, learners must either copy these into their books or teachers can photocopy the activity.

4. Assessment

The programme of assessment suggested in the lesson plans and tracker is adaptable and can be adjusted to comply with the CAPS as amended by Circular S1 of 2017 and provincial responses to this. The lesson plans and tracker provide a number of resources to support both formal and informal assessment in this programme, as noted below:

- Oral and practical activities which you can use to assess learners as you observe and interact with them in class are provided in the tracker. Rubrics and checklists with criteria for this assessment are provided in the tracker, at the end of the table for the week in which the assessment is suggested.
- There is an item bank of written assessment questions, with marking memos in the tracker. Items that are relevant to a specific lesson are

noted in the resources column for the lesson in the tracker.

- A complete overview of the programme of assessment for the term is given in the tracker. This shows you when it is suggested you carry out both formal (and informal) assessment tasks which are oral, practical and written. This will assist you in planning and monitoring your assessment programme.
- There is also a recommended mark record sheet in the tracker. This has been drawn up to assist you as you record your marks on SA-SAMS.

5. Managing the lesson programme

A set of orientation activities on eight different topics aligned with the CAPS baseline assessment requirements is provided for the start of the term. You should use all or a selection of these activities in the first week of term before the formal teaching of the numbered lesson plans begins.

The formal curriculum for Term 2 of Grade 2 is covered in a set of 40 numbered, fully developed lesson plans, paced to cover a 50-day teaching term. There are four such lesson plans each week for ten weeks of the term. There is no formal numbered lesson plan for the fifth lesson each week; instead, it is assigned for you to use for a variety of purposes. You can use this time to catch up, remediate or consolidate the content covered in the week's formal lessons. Learners can complete the worksheets from the DBE workbook related to topics taught in the week if they did not manage to do them in the course of the week.

Each lesson is designed to last 90 minutes. If your school's timetable has different period lengths, you will have to adjust the amount of work done in each lesson to accommodate this. However, each school should allow seven hours for Mathematics each week, and it should be possible to fit in all the work for the week, even if the lengths of periods are not the same as in the lesson plans.

6. Sequence adherence and pacing

Each lesson and its contents have been carefully sequenced. It is therefore important that lessons are not skipped. Should you miss a Mathematics lesson for any reason, you should continue the next day from where you last left off. Do not leave a lesson out. You may need to speed up the pace of delivery to catch up a missed lesson by covering the lesson concept content of two consecutive days in one day. To do this you could cut out or cut back on some of the routine activities like mental mathematics or homework reflection to save time until you are back on track with the expected delivery of the plans. You need to prepare very well as this will help you to manage the full set of lessons at the appropriate pace.

7. Lesson preparation

The lesson plans provide a detailed lesson design for you to follow. However, to deliver the lessons successfully **you must do the necessary preparation yourself**. The information below outlines some key aspects of preparation.

a) **Term focus:** Start by looking at the CAPS document and **orientating** yourself to the CAPS content focus for the term. It is important that you are clear about the content focus, as this will frame everything you do in your Mathematics lessons during the term.

b) **Prepare resources:** The resources needed for each lesson are listed in each lesson plan and in the tracker. It is very important that you check what is required for each lesson ahead of time, so that you have all your resources ready for use every day (e.g. counters, number boards, paper cut-outs, examples of shapes, etc.).
   - **Your lessons will not succeed if you have not prepared properly for them.**
   - If you do not have all the necessary resources readily available, see how best you can improvise, e.g. get learners to collect bottle tops or small stones to be used for counting, or make your own flard cards/number boards using pieces of cardboard and a marker pen.
   - Collect empty cool drink cans, cereal boxes, washing powder boxes, plastic bottles, etc. for the **shop activity** in the week long in advance, so that you have all the necessary goods to stock your shop.

- Use newspapers and magazines to cut out pictures that could be used in your teaching. If you have access to the internet, search for and print out pictures that you may need to use as illustrations in your lessons.

c) **Prepare for the written classwork and homework activities:** When preparing your lessons, check the lesson activity requirements. In some instances you will need to write information or draw some diagrams on the board that you will use while you do the interactive whole-class-teaching component of the lesson. Also mark the homework activities as often as you can, so that you can give useful feedback to the learners each day, and be aware of any difficulties learners are having as soon as they become apparent.

d) **Prepare to teach the concepts and skills associated with the lesson topic:** Think carefully about what it is that you will teach your learners in the lesson. Prepare a short introduction to the topic, so that you can explain it in simple terms to your learners. Make sure you have prepared for the teaching of the concepts before you teach – you need to be able to explain new Mathematics content and skills to the learners. Be sure you have gone through the oral teaching activities provided in the lesson plans. Also make sure that you have thought about how to use the resources in the lesson effectively. This preparation needs to be done in advance, so that you do not waste time during the lesson. Be sure you are familiar with the sequence of activities in the lesson plan. Prepare yourself to assist learners with any questions they might have during the lesson. Also give some thought to how you will accommodate learners with barriers to learning.

e) **Lesson pace:** Think about how much time you will spend on each activity. It is important to plan how you will manage the pace of the lesson carefully; otherwise you will not manage to cover all the lesson content. Not all learners work at the same pace. You need to determine the pace – be guided by the average learner and the recommendations in the lesson plans. Be careful not to slow down to the pace of the slowest learners as this will disadvantage the other learners.

f) **Organisation of learners:** Think about how you will organise learners when they do the classwork activities. Will they work alone, in pairs or in small groups? How will you organise the pairs or groups if you choose to use them? You need to organise the learners quickly at the beginning of the lesson, so that you do not waste too much time on this.

g) **Inclusive education:** Consider the needs of any learners with barriers to learning in your class, and how best you can support them. The DBE has published some excellent materials to support you in working with learners with learning barriers. Two such publications are:
   - Directorate Inclusive Education, Department of Basic Education (2011) *Guidelines for Responding to Learner Diversity in the Classroom Through Curriculum and Assessment Policy Statements*. Pretoria. www.education.gov.za, www.thutong.doe.gov.za/InclusiveEducation.
   - Directorate Inclusive Education, Department of Basic Education (2010) *Guidelines for Inclusive Teaching and Learning. Education White Paper 6. Special needs education: Building an inclusive education and training system*. Pretoria. www.education.gov.za, www.thutong.doe.gov.za/InclusiveEducation.

LESSON PLAN OUTLINE

Lesson Plan Outline	
Each lesson plan has several components. Information about each is given in the table below. This information tells you how to use each of the components of the lesson plans and how they fit together to create a well-paced and properly scaffolded Mathematics lesson each day. You need to read this outline as you prepare each lesson until you are fully familiar with the general lesson plan components, pace and structure.	
Lesson topic	Each lesson has a topic with specific detail about the day's lesson.
CAPS topics	The CAPS content related to the day's lesson is given here, together with the reference number for this content in the expansion of content section in the CAPS document for this term. You are encouraged to look at the CAPS to read about the selected curricular topics for the day.
Lesson vocabulary	A list of all mathematical terms used in the lesson is given here. Go through the lesson vocabulary each day as you prepare for the lesson. These terms are important, as they are the language of Mathematics that each learner needs to learn and understand in order to build a solid foundation and understanding of this subject. It is important to explain these words to your learners and to practise using them with your learners during the lesson.
Prior knowledge and lesson concept	The prior knowledge and lesson concept section gives information about content that learners should have learnt in earlier grades that will be built on in this lesson. • You need to read through this section when you do your lesson preparation. • No time is allocated to this part of the plan because it does not form part of the teaching of the day's lesson. • The information about prior knowledge may help you to assist learners who struggle to understand the content of the lesson because there are gaps in the prior knowledge on which the lesson is based. You can use the information about prior knowledge to help you identify such gaps and to diagnose learners' needs in relation to content they do not yet know that may be preventing them from understanding the day's lesson. • Remediation may be needed on prior knowledge that you notice is not properly in place.
Assessment	A reminder to refer to the tracker for the formal/informal oral, practical or written assessment activity for the day is given here. • On-going formal/informal oral and practical assessment should be done virtually every day in your class. This means you will record a mark for a few learners for a certain criterion from the curriculum each day. Decide how many learners to assess every day, so that you assess your whole class in the time allocated to each assessment activity. • Rubrics and checklists to guide you in giving ratings for the oral and practical assessments are given in the tracker at the end of the tracker table for each week. Each day you need to use the appropriate rubric or checklist for the assessment activity of that day. • Written test items and their memos are provided in the tracker. Links to these items are given in the resources column of the tracker to show you in which lesson they should best be used. • A *Suggested Assessment Record Sheet* that you can use to record your term marks is given in the tracker. This sheet aligns with the SA-SAMS.
Remediation	***Optional as required.*** You could use these activities to assist slower learners. You need to decide, based on your observation of the learners while you are teaching the lesson content, whether to use this content and with which learners. It will be done with a smaller group of learners/individual learners while the rest of the class is working through the Classwork activity.

Lesson Plan Outline	
Enrichment	***Optional as required.*** You could use these activities as extra work for fast learners or others interested in doing them. Activities that you can use for enrichment opportunities for learners who have completed the lesson activities are provided in a set of enrichment activity cards at the end of the lesson plan set. Ideally, you should photocopy the enrichment cards, paste them onto cardboard and laminate them, so that they can be used as a resource, not only this year, but in the future as well. Learners should work on these cards independently or with their peers who have also completed the classwork. They may work through the cards in any order. You may need to explain some of the activities to the learners who use them. You should tell them to ask questions it they have any. All learners who show an interest in the enrichment activities should be encouraged to work through the cards.
Mental mathematics **(15 minutes)**	This is the first component of the lesson. We recommend that you take at most 15 minutes to do the mental mathematics activity. There are two parts to the mental mathematics activity, a counting activity and a set of questions to drill recall and basic mathematical strategies. Mental mathematics is not a concrete activity (as the title suggests). However, if there are learners who need concrete aids to complete the mental mathematics activities, we suggest that you allow them to use their fingers to count on. • Observe which learners struggle with mental activities, and make sure you spend time to assist them to reach the required level of competence by offering remediation activities using concrete aids. • The answers to the ten mental mathematics questions are given in the answer column in the lesson plans. • It would be far better to do all ten questions per day, but if you find that your learners struggle to finish these in ten minutes, do a minimum of five questions. There is a set of mental mathematics challenge cards at the end of the lesson plans. Learners write the answers to the questions given on these cards. We recommend that learners only do written mental mathematics once a week and oral mental mathematics on all the other days. You can use this work to obtain a mental mathematics activity mark each week.
Correction/reflection on homework **(15 minutes)**	This is the second component of the lesson. We recommend that you take 15 minutes to remediate and correct the previous day's homework. Read out answers to all of the homework questions. Let learners/peers mark the work. Also try to check homework yourself as often as you can. Choose one or two activities that you realise were problematic to work through in full with the whole class. In this part of the lesson you may reflect on the previous day's work. Allow learners the opportunity to write corrections as needed.
Lesson content – concept development **(30 minutes)**	This is the third component of the lesson. It is the body of the lesson, in which learners are introduced to the new work planned for the day. We recommend that you actively teach your class for 30 minutes – going through the activities interactively with your learners. • Activities on the content that you will teach with worked examples and suggested explanations are given. These activities have been carefully sequenced and scaffolded so that they support the teaching of the concepts for the day. You should work through each of these with your class. • It is important to manage the pace of the lesson carefully, otherwise you will not manage to cover all the lesson content. Once you have introduced the new concept, work through Activity 1 of the lesson with the whole class (or with learners in groups). Then immediately move on to the next activity, and provide a reasonable time for the learners to complete Activity 2, but do not wait for the last learner to finish before moving on. If there are further activities, continue pacing yourself in this way, so that you work through all of the activities in each lesson. A few activities are marked as *optional* – these need only be done if you have sufficient time.

Lesson Plan Outline	
Classwork activity (25 minutes)	This is the fourth component of the lesson. We recommend that you allocate 25 minutes to classwork. You could go over one or two of the classwork activities orally with the whole class before allowing the class to complete the activities independently (individually or in groups). • Learners do most of the activities in their Mathematics books (an exercise book for learner Mathematics writing activities). Some activities are done in the DBE workbook. • You should allow the learners opportunities to do these activities alone, in pairs and in groups so that they experience working alone as well as with their peers. • Wrap up the lesson each day by giving the learners the answers to the classwork, and allow time for corrections to be written if and when necessary.
Homework activity (5 minutes)	This is the fifth and final component of the lesson. We have allocated five minutes to give you time to tell the learners about the homework each day. Here you find a set of activities on the day's content that you can set for your class to do for homework. This is to consolidate the Mathematics that you have taught them that day. Homework also promotes learner writing and development of their mathematical knowledge.
Reflection	Each day there is a reminder to note your thoughts about the day's lesson. You will use these notes as you plan and prepare for your teaching.

WEEK 1

LESSON 1: NUMBERS 21–30

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.
Lesson vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, order, compare.
Prior knowledge:
Learners should have been taught how to:
- Write number symbols 1–20.
- Recognise, read and write number names 1–10.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:
- Order a given set of selected numbers up to 50.
- Recognise, identify, read and write number symbols 0 to 150.
- Order and compare whole numbers to 50, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

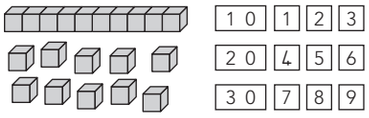
Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:
- DBE worksheet 33 no. 1 and 2 (p. 68).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Ask the learners to show the following numbers using base ten blocks: 21, 22, 23, 24, 25, 26, 27, 28, 29 and 30. Ask questions such as: *What would you do with your counters to make it one more or one less? What number comes before 22?* (21) *What number comes after 22?* (23)

Problem solving: *We play a game where we have to choose numbers. I choose a number smaller than 25, but bigger than 23. What is my number?* (24)
Use concrete objects to solve the problem.



Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s from 0 and 50 using a number chart.

1.2 Mental mathematics activity (10 minutes)

	Put in order from the smallest to the biggest	Answer
1.	16, 25, 30, 9, 23	9, 16, 23, 25, 30
2.	41, 32, 8, 17, 39	8, 17, 32, 39, 41
3.	9, 30, 45, 23, 32	9, 23, 30, 32, 45
4.	5, 32, 49, 31, 22	5, 22, 31, 32, 49
5.	47, 32, 0, 45, 1	0, 1, 32, 45, 47

	Put in order from the smallest to the biggest	Answer
6.	23, 50, 42, 25	23, 25, 42, 50
7.	9, 27, 45, 12	9, 12, 27, 45
8.	27, 36, 45, 42, 3	3, 27, 36, 42, 45
9.	14, 46, 39, 40	14, 39, 40, 46
10.	9, 31, 5, 48, 50	5, 9, 31, 48, 50

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

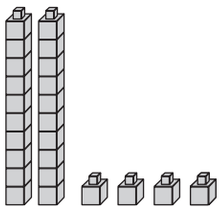
3. Lesson content – concept development (30 minutes)

In this first lesson of the term you begin to extend the range of numbers learners will work with. The first activity of this lesson builds on and consolidates place value knowledge using base ten blocks and flard cards (which learners have already used in Term 1). It is important that you allow learners the chance to show the displays and talk about the numbers represented using the language of place value – tens and units. This starts to develop their fluency in the use of mathematical language.

In the second activity of this lesson you continue to allow learners to work with numbers in the extended range (up to 30) but at the same time you bring in more mathematical vocabulary – that of comparison between numbers (*biggest, smallest, between, more than* and *less than*). Allow all learners to use this vocabulary in discussion and in response to your questions. Remember to give the learners a voice – they should answer your questions using full sentences so that you can check that they are using the vocabulary correctly.

Activity 1: Learners work in groups

- Write the numbers 21 to 30 on the board.
- Give each group of learners their own base ten blocks up to 30 and flard cards to use at their desks.
- Ask the learners to show you each of the numbers from 21 to 30, first using their base ten blocks and then the flard cards.
- Discuss the tens and units that make up the numbers you work with (place value discussion).
- For example: the number 24.
- Using Unifix cubes, show the number 24.

 (2 tens and 4 units = 24)

- Using flard cards, show 24.
- Show this using the cards separately (which shows the breakdown into tens and units) *and* overlaid (which makes it look like the number 24).

Activity 2: Whole class activity

- Ask the learners the following questions, using the numbers on the board.
  - *Show me the biggest number.* (30)
  - *Show me the smallest number.* (21)
  - *Which number comes between 24 and 26?* (25)
  - *Which number is one less than 27?* (26)
  - *Which number is one more than 23?* (24)
  - *Which number is two less than 27?* (25)
  - *Which number is two more than 23?* (25)
  - *Etc.*

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 1: Numbers 21–30

Classwork

1. Draw objects for the number: 27, 22, 28 and 25, showing tens and units.
   (Learners should draw groups of ten counters (or other objects such as base ten blocks) and the units to represent the numbers. These illustrations are using counters.)
   27: ○○○○○○○○○○ ○○○○○○○○○○ ○○○○○○○
   22: ○○○○○○○○○○ ○○○○○○○○○○ ○○
   28: ○○○○○○○○○○ ○○○○○○○○○○ ○○○○○○○○
   25: ○○○○○○○○○○ ○○○○○○○○○○ ○○○○○

2. Write down the number name for the following numbers: 25, 29, 23 and 26.
   (Twenty-five, twenty-nine, twenty-three, twenty-six.)

3. Draw a number line from 20 to 30. Then answer these questions:
   a) Which number comes after 21? (22)
   b) Which number comes before 28? (27)
   c) Which numbers are between 21 and 28? (22, 23, 24, 25, 26 and 27)

4. Arrange these numbers from the smallest to the biggest: 23, 25, 22, 26, 24. (22, 23, 24, 25, 26)

5. Arrange these numbers from the biggest to the smallest: 28, 29, 26, 27, 25. (29, 28, 27, 26, 25)

Homework

1. Draw objects for the number 23, showing tens and units.
   23: ○○○○○○○○○○ ○○○○○○○○○○ ○○○

2. Write the number name for 28. (twenty eight)

3. Complete the following: 20 + __ = 28. (8)

4. Arrange these numbers from the biggest to the smallest: 23, 27, 25, 26, 24. (27, 26, 25, 24, 23)

LESSON 2: NUMBERS 21–30

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than, smallest, order, compare.

Prior knowledge:
Learners should have been taught how to:

- Write number symbols 1–20.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:

- Recognise, identify, read and write number symbols and number names 0–50.
- Order and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

Resources: Counters, number symbol and name cards 21–30 (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 33 no. 3 (p. 68).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners the following amounts of counters and ask them to put them in different size groups and count the number in each group, starting from 20 each time: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. Ask learners to arrange the groups of counters from the smallest to the biggest. Learners should remember that the sizes of the objects do not influence the number of objects.

Problem solving: *My mother gave me 2 more marbles than she gave my sister. My sister got 24 marbles. How many marbles did I get?* Show learners how to find the solution using concrete materials. (Ask them similar questions using different numbers of marbles.)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s starting at 12 and ending at 48.

1.2 Mental mathematics activity (10 minutes)

	Put these numbers in order from the biggest to the smallest	Answer
1.	15, 45, 50, 46, 12	50, 46, 45, 15, 12
2.	27, 48, 24, 36, 11	48, 36, 27, 24, 11
3.	8, 40, 46, 32, 12	46, 40, 32, 12, 8
4.	50, 41, 36, 23, 11	50, 41, 36, 23, 11
5.	50, 48, 23, 11, 12	50, 48, 23, 12, 11

	Put these numbers in order from the biggest to the smallest	Answer
6.	1, 45, 9, 30, 50	50, 45, 30, 9, 1
7.	8, 32, 45, 9, 47	47, 45, 32, 9, 8
8.	12, 15, 7, 42, 31	42, 31, 15, 12, 7
9.	4, 50, 22, 35, 16	50, 35, 22, 16, 4
10.	9, 23, 5, 50, 19	50, 23, 19, 9, 5

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Please note that this lesson and the next five lessons further extend and consolidate the learners' number concept. This is a very important pre-operational concept.

Activity 1: Learners work in groups

- Give learners (in their groups) different numbers of counters (between 21 and 30).
- Ask learners to count the objects.
- When the learners count the objects, check to see if they use groups of ten to help them keep count.
- Encourage them to make groups of ten and count the number of loose units that remain. This consolidates place value.
- Write down the answers they get as a number symbol and name.

Activity 2: Whole class activity

- Stick the number symbol and name cards for numbers 21–30 in a random order on the board.
- Place the cards in the correct order while the learners read the number names.
- Ask the learners to look at numbers 21 to 30.
- Ask the learners if they notice anything special about these numbers.
- *What do they notice?* (Possible answers may involve odd numbers/even numbers/tens and units.)

Activity 3: Whole class activity

- Write the following numbers on the board: 24, 28, 30, 21, 26, 23, 22, 25, 27 and 29.
- Ask learners the following questions:
  - *Which number is one less than 24?* (23)
  - *Which number is one more than 24?* (25)
  - *Which number is equal to 24?* (24)
- Repeat using different numbers.

Activity 4: Whole class activity

If there is some time – work through a few word problems with the class. This must not distract from the main content of the lesson, which is comparison of numbers to consolidate number concept.

- Jabu has 24 marbles. Norma has 4 more. How many does Norma have? Sihle has 8 less than Jabu. How many does Sihle have?
- Read the question with the class and allow them to help you to work out how to find the solution to the problem.
  - *Where should we start?* (Jabu has 24 marbles. Norma has 4 more. How many does Norma have?)
  - *What do we do?* (24 + 4 = 28 Work out the number of marbles Norma has by adding 4 to the number that Jabu has.)
  - *What do we do next?* (Work out how many marbles Sihle has.)
  - *How do we do that?* (24 – 8 = 16 Work out the number of marbles Sihle has by subtracting 8 from the number that Jabu has.)
- Repeat using different numbers stories. Encourage the learners to make up their own stories that lead to addition and subtraction problems.

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 2: Numbers 21–30

In this activity learners continue to make representations of numbers that will help them to consolidate their understanding of place value. They are asked to draw beads of different numbers, showing groups of ten. When they do this, you should encourage them to draw the groups of ten (as many as possible using the given number) and then count the number of loose units that remain. This consolidates place value – the number of groups (of ten) gives the tens digit and the counters that are left ungrouped gives the units digit in the two-digit number that they have shown.

Classwork

1. Arrange these numbers from the smallest to the biggest: 30, 25, 29, 21. (21, 25, 29, 30)

2. Give two numbers that are smaller than 25 and two numbers that are bigger than 25. (Answers may vary. Any of the following: Smaller than 25: 21, 22, 23, 24; Bigger than 25: 26, 27, 28, 29, 30)

3. Draw 24 beads, showing groups of ten. How many counters are left? (Drawing not shown. 2 groups of 10, 4 counters are left ungrouped. The number they have drawn has 2 tens and 4 units.)

4. Complete the pattern 20, __, 24, 26, __, __, 32, __, __, __, 40. (22, 28, 30, 34, 36, 38)

Homework

1. Choose two numbers between 21 and 30. Write them down as well as their number name. (Answers will vary.)

2. Write down two numbers that are bigger than 27, but not bigger than 30. (Answers will vary. Any two of 28, 29, 30. 30 is included because it is not bigger than 30, it is equal to 30.)

3. Draw 28 beads, showing groups of ten. How many beads are left? (Drawing not shown. 2 groups of 10, 8 are left ungrouped. The number they have drawn has 2 tens and 8 units.)

4. Write down two numbers that are smaller than 24, but not smaller than 21. (Answers will vary. Any two of 23, 22, 21. 21 is included because it is not smaller than 21, it is equal to 21.)

LESSON 3: NUMBERS 31–40

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, order, compare, tens, ones.

Prior knowledge:
Learners should have been taught how to:

- Write number symbols 1–20.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:

- Compare numbers up to 50.
- Recognise, identify, read and write number symbols 0–150.
- Recognise, identify, read and write number symbols and number names 0–50.
- Order and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 33 no. 4 (p. 69).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Ask the learners to show the following numbers using base ten blocks or counters: 31, 32, 33, 34, 35, 36, 37, 38, 39 and 40. Ask questions such as: *What would you do with your counters to make it one more or one less? What number comes before 32?* (31) *What number comes after 32?* (33)

Problem solving: *We play a game where we have to choose numbers. I choose a number smaller than 38, but bigger than 36. What is my number?* (37) Use concrete materials to solve the problem.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s between 20 and 60.

1.2 Mental mathematics activity (10 minutes)

	What is 1 more than:	Answer
1.	24	25
2.	32	33
3.	49	50
4.	16	17
5.	2	3

	What is 1 more than:	Answer
6.	30	31
7.	41	42
8.	47	48
9.	12	13
10.	39	40

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

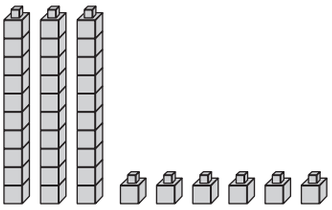
3. Lesson content – concept development (30 minutes)

The previous two lessons extended the number range to 30, in this lesson (and the next one) you extend the number range to 40. In the first activity of this lesson you will use base ten blocks and flard cards. It is always important that you allow learners the chance to show the displays and talk about the numbers represented using the language of place value – tens and units to continue to allow them the opportunity to improve their fluency in the use of mathematical language.

In the second activity of this lesson you continue to allow learners to work with numbers in the extended range (up to 40) but at the same time you bring in more mathematical vocabulary – that of comparison between numbers (*biggest*, *smallest*, *between*, *more than* and *less than*). Allow all learners to use this vocabulary in discussion and in response to your questions. Remember to give the learners a voice – they should answer your questions using full sentences so that you can check that they are using the vocabulary correctly.

Activity 1: Learners work in groups

- Write the numbers 31 to 40 on the board.
- Give each group of learners their own base ten blocks and flard cards to use at their desks.
- Each group member chooses 3 numbers between 31 and 40 and shows them to their fellow group members using base ten blocks and then flard cards.
- The group discusses how the number is made up of tens and ones, e.g. 36 is three tens and six ones.
- Using Unifix cubes, show the number 36.



(3 tens and 6 units = 36)

- Using flard cards, show 36.
- Show this using the cards separately (which shows the breakdown into tens and units) *and* overlaid (which makes it look like the number 36).

- Allow some report back discussion from each group (one group member) for a whole class discussion.

Activity 2: Whole class activity

- Ask the learners the following questions about the numbers written on the board:
  - *Show me the biggest number.* (40)
  - *Show me the smallest number.* (31)
  - *Which number is between 34 and 36?* (35)
  - *Which number is one less than 37?* (36)
  - *Which number is one more than 33?* (34)
  - *Which number is two less than 37?* (35)
  - *Which number is two more than 33?* (35)
  - *Etc.*

4. Classwork activity (25 minutes) (See next page)

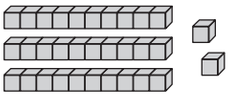
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 3: Numbers 31–40

Classwork

1. Draw a picture of counters or base ten blocks to show each of the following numbers: 37, 32, 38 and 35. (Learners should draw counters grouped in tens and units to represent the numbers.)
   E.g. 37: with beads:
   ○○○○○○○○○○
   ○○○○○○○○○○
   ○○○○○○○○○○
   ○○○○○○○

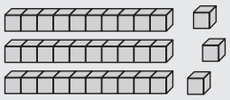
   E.g. 32, with base ten blocks:
   

2. Write down the number and number name for the following numbers: 33, 39, 34 and 36. (Thirty-three, thirty-nine, thirty-four, thirty-six.)

3. Draw a number line from 31 to 40. Then answer these questions.
   a) Which number comes after 31? (32)
   b) Which number comes before 38? (37)
   c) Which numbers are between 31 and 38? (Note that the numbers between two given numbers do not include the given numbers. The answer is thus 32, 33, 34, 35, 36 and 37)

4. Arrange these numbers from the smallest to the biggest: 33, 35, 32, 36, 34. (32, 33, 34, 35, 36)

Homework

1. Draw a picture for number 33 using base ten blocks.
   

2. Write the number name for 38. (Thirty-eight)

3. Complete the following: 30 + __ = 38 (8)

4. Arrange these numbers from the biggest to the smallest: 33, 37, 35, 36, 34. (37, 36, 35, 34, 33)

LESSON 4: NUMBERS 31–40

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, correct order, estimate.

Prior knowledge:
Learners should have been taught how to:

- Write number symbols 1–20.
- Recognise, read and write number names 1–10.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:

- Compare numbers up to 50.
- Recognise, identify, read and write number symbols 0–150 and number names to 50.
- Order and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal toOrder and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

Resources: Counters, number symbol and name cards (31–40) (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 33 no. 5 (p. 69).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners a number of counters between 30 and 40. Discuss with the learners who they think has the biggest/smallest amount. Ask them to estimate before they count. **Learners should remember that the sizes of the objects do not influence the number of objects.**

Problem solving: *My mother gave me 1 more marble than my sister. My sister has 36 marbles. How many marbles do I have?* Show how to solve the problem using concrete materials. (Ask other similar problem questions using different numbers if items.)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s between 30 and 70.

1.2 Mental mathematics activity (10 minutes)

	What is 1 less than:	Answer
1.	40	39
2.	50	49
3.	44	43
4.	32	31
5.	19	18

	What is 1 less than:	Answer
6.	22	21
7.	12	11
8.	47	46
9.	1	0
10.	46	45

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Call 10 learners to the front. Randomly give each of them a number name card (from 31–40).
- Arrange the learners in a line in the correct order according to the number name card they are holding (chronological order).
- Discuss the order and place value of the numbers.

Activity 2: Whole class activity

Continue to work with the 10 learners in front of the class holding their number names.

- Ask the rest of the learners the following questions:
  - *Who is holding the following numbers: 34, 38, 40, 31, 36, 33, 32, 35, 37 and 39?* (Learners must name each one.)
  - *Which number is one less than 34?* (33)
  - *Which number is one more than 34?* (35)
  - *Which number is equal to 34?* (34)
- Repeat using other numbers.
- Remember to involve the learners holding the number names.

Activity 3: Whole class activity

If there is some time – work through a few word problems with the class. This must not distract from the main content of the lesson, which is comparison of numbers to consolidate number concept.

- Leketi has 34 marbles. Tony has 36 marbles. Who has more marbles? How many more?
- Read the question with the class and allow them to help you to work out how to find the solution to the problem.
  - *Where should we start?* (Read the question. Think about what to do.)
  - *What do we do?* (Identify the numbers in the question: 34 and 36. 36 is bigger. Tony has more marbles.)
  - *What do we do next?* (36 – 34 = 2. Tony has 2 more marbles than Leketi has.)
- Repeat using different numbers stories. Encourage the learners to make up their own stories that lead to addition and subtraction problems. Notice that this problem involved the comparison on two numbers.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 4: Numbers 31–40

In this activity learners continue to make representations of numbers that will help them to consolidate their understanding of place value. They are asked to draw beads of different numbers, showing groups of ten. When they do this, you should encourage them to draw the groups of ten (as many as possible using the given number) and then count the number of loose units that remain. This consolidates place value – the number of groups (of ten) gives the tens digit and the counters that are left ungrouped gives the units digit in the two digit number that they have shown.

Classwork

1. Complete the pattern 31, __, __, 34, 35, __, __, 38, __, __. (32, 33, 36, 37, 39, 40)

2. Arrange these numbers from the smallest to the biggest: 40, 35, 39, 31. (31, 35, 39, 40)

3. Give two numbers that are smaller than 35 and two numbers that are bigger than 35. (31, 32, 33, 34, 36, 37, 38, 39, 40)

4. Draw 34 beads, showing groups of ten. (Drawing not shown. 3 groups of 10, 4 beads are left ungrouped. The number they have drawn has 3 tens and 4 units.)

Homework

1. Choose any two numbers between 31 and 40. Write them down as well as their number names. (Answers will vary.)

2. Write down two numbers that are bigger than 37, but not bigger than 40. (38, 39, 40)

3. Draw 38 beads, showing groups of ten. (Drawing not shown. 3 groups of 10, 8 are left ungrouped. The number they have drawn has 3 tens and 8 units.)

4. Write down two numbers that are smaller than 34, but not smaller than 31. (33, 32, 31)

WEEK 2

LESSON 5: NUMBERS 41–50

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, order, compare.

Prior knowledge:
Learners should have been taught how to:

- Write number symbols 1–20.
- Recognise, read and write number names 1–10.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:

- Compare numbers up to 50.
- Recognise, identify, read and write number symbols 0–150.
- Recognise, identify, read and write number symbols and number names 0–50.
- Order and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 34 (p. 70).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Ask learners to show the following numbers using base ten blocks or counters: 41, 42, 43, 44, 45, 46, 47, 48, 49 and 50. Ask questions such as: *What would you do with your counters to make it one more or one less? What number comes before 42?* (41) *What number comes after 42?* (43)

Problem solving: *We play a game where we have to choose numbers. I choose a number smaller than 43, but bigger than 41. What is my number?* (42) Use concrete objects to solve the problem.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 0 and 50 using a number chart.

1.2 Mental mathematics activity (10 minutes)

	What is 2 more than:	Answer
1.	40	42
2.	32	34
3.	45	47
4.	12	14
5.	23	25

	What is 2 more than:	Answer
6.	35	37
7.	28	30
8.	18	20
9.	3	5
10.	19	21

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

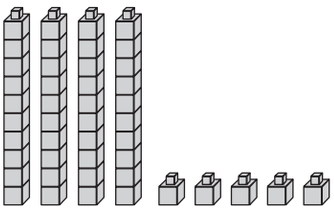
3. Lesson content – concept development (30 minutes)

In the previous two lessons the number range was extended to 40, in this lesson (and the next one) you extend the number range to 50. In the first activity of this lesson you will use base ten blocks and flard cards. Once again, remember to allow learners the chance to show the displays and talk about the numbers represented using the language of place value – tens and units to continue to allow them the opportunity to improve their fluency in the use of mathematical language.

In the second activity of this lesson you continue to allow learners to work with numbers in the extended range (up to 50) but at the same time you bring in more mathematical vocabulary – that of comparison between numbers (*biggest*, *smallest*, *between*, *more than* and *less than*). Allow all learners to use this vocabulary in discussion and in response to your questions. Remember to give the learners a voice – they should answer your questions using full sentences so that you can check that they are using the vocabulary correctly.

Activity 1: Learners work in groups

- Write the numbers 41 to 50 on the board.
- Give each learner their own base ten blocks and flard cards to use at their desks.
- Ask the learners to show you numbers 41 to 50, first using their base ten blocks and then their flard cards.
- For example, learners could show the number 45.
- Using Unifix cubes, show the number 45.



(4 tens and 5 units = 45)

- Using flard cards, show 45.
- Show this using the cards separately (which shows the breakdown into tens and units) and overlaid (which makes it look like the number 45).

- Discuss the place value (tens and units) present in the numbers 41–50.

Activity 2: Whole class activity

- Ask the learners the following questions: (They refer to the numbers written on the board.)
  - *Show me the biggest number.* (50)
  - *Show me the smallest number.* (41)
  - *Which number is between 44 and 46?* (45)
  - *Which number is one less than 47?* (46)
  - *Which number is one more than 43?* (44)
  - *Which number is two less than 47?* (45)
  - *Which number is two more than 43?* (45)
  - Etc.

4. Classwork activity (25 minutes) (See next page)

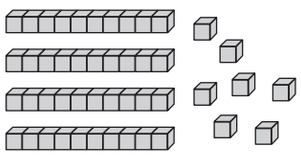
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 5: Numbers 41–50

Classwork

1. Draw a picture/diagram using base 10 blocks for each of the following numbers: 47, 42, 48 and 45. (Learners should draw counters grouped in tens and units to represent the numbers.)
   E.g. 47 using base ten blocks:



2. Write down the number name for the following numbers: 43, 49, 44 and 46. (forty-three, forty-nine, forty-four, forty-six)

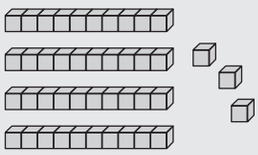
3. Draw a number line from 41 to 50. Then answer these questions:
   a) Which number comes after 41? (42)
   b) Which number comes before 48? (47)
   c) Which numbers are between 41 and 48? (42, 43, 44, 45, 46 and 47)

4. Arrange these numbers from the smallest to the biggest: 43, 45, 42, 46, 44. (42, 43, 44, 45, 46)

5. Arrange these numbers from the biggest to the smallest: 48, 49, 46, 47, 45. (49, 48, 47, 46, 45)

Homework

1. Draw a picture/diagram using base 10 blocks for number 43.



2. Write the number name for 48. (forty-eight)

3. Complete the following: 40 + __ = 48 (8)

4. Arrange these numbers from the biggest to the smallest: 43, 47, 45, 46, 44. (47, 46, 45, 44, 43)

LESSON 6: NUMBERS 41–50

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, count on, more than, less than, greater than, greatest, less than, equal to, smaller than, smallest, odd number, even number.

Prior knowledge:
Learners should have been taught how to:

- Write number symbols 1–20.
- Describe, compare and order up to 20 objects and numbers to 20.

Concepts:

- Compare numbers up to 50.
- Recognise, identify, read and write number symbols 0–150.
- Order and compare whole numbers to 99, from greatest to smallest, smallest to greatest, smaller than, greater than, more than, less than and is equal to.

Resources: Number symbol and name cards (41–50) (see *Printable Resources*), counters, old books/magazines (one per group – with at least 50 pages).

DBE workbook activities relevant to this lesson:

- DBE worksheet 34 (p. 71).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give each learner the following number of counters and ask them to count on, starting from 40: 41, 49. Ask the learners which is the bigger number. Discuss by how many. Remind learners that the size of the objects does not influence the number of objects.

Problem solving: *My mother gave me 2 more marbles than my sister. My sister has 45 marbles. How many marbles do I have?* Show how to solve the problem using counters. (Ask other similar problem questions using different numbers of different objects.)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 0 and 35 using a number chart.

1.2 Mental mathematics activity (10 minutes)

	What is 2 less than:	Answer
1.	12	10
2.	15	13
3.	24	22
4.	37	35
5.	42	40

	What is 2 less than:	Answer
6.	45	43
7.	17	15
8.	50	48
9.	6	4
10.	32	30

2. Homework/corrections (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Learners work in groups

- Give each group an old book (or magazine) and ask them to turn to page 41.
- Stick the number symbol and name card of 41 on the board.
- Repeat this exercise from pages 42–50.
- Watch how the learners page through the books to get to page 40/41, etc. Do they count from 1 or do they skip a whole lot and slow down when they are near to 40?
- Discuss how to page to a given page number (e.g. page 41) in the quickest way.

Activity 2: Whole class activity

- Ask the learners the following questions: (They use their books/magazines.)
  - *Show the following page numbers in your book/magazine*: 44, 48, 40, 41, 46, 43, 42, 45, 47 and 49.
  - *What do you do if not all of the pages are labelled?* (e.g. If you are looking for page 45 but it is not labelled – look for pages 44 and 46 – page 45 will come between these two pages.)
- Ask learners more questions about numbers in the range 41–50. For example:
  - *Which number is one less than 44?* (43)
  - *Which number is one more than 44?* (45)
  - *Which number is equal to 44?* (44)
- Ask other questions about numbers which are less than/more than/equal to in the number range 41–50.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 6: Numbers 41–50

In this activity learners continue to make representations of numbers that will help them to consolidate their understanding of place value. They are asked to draw beads of different numbers, showing groups of ten. When they do this, you should encourage them to draw the groups of ten (as many as possible using the given number) and then count the number of loose units that remain. This consolidates place value – the number of groups (of ten) gives the tens digit and the counters that are left ungrouped gives the units digit in the two-digit number that they have shown.

Classwork

1. Write down the numbers 41 to 50 in order. Circle the odd numbers in green and the even ones in red. (Learners would write the numbers and circle 42, 43, 45, 47, 49.)

2. Arrange these numbers from the smallest to the biggest: 50, 45, 49, 41. (41, 45, 49, 50)

3. Give two numbers that are smaller and two numbers that are bigger than 45. (41, 42, 43, 44, 45, 46, 47, 48, 49, 50)

4. Draw 44 circles, showing groups of ten. (Drawing not shown. 4 groups of 10, 4 circles are left ungrouped. The number they have drawn has 4 tens and 4 units.)

5. Complete the pattern: 0, 5, __, 15, 20, __, __, __, __, __, 50. (10, 25, 30, 35, 40, 45)

Homework

1. Choose any two numbers between 41 and 50. Write them down as well as their number names. (Answers will vary.)

2. Write down two numbers that are bigger than 47, but not bigger than 50. (48, 49, 50)

3. Draw 48 squares, showing groups of ten. (Drawing not shown. 4 groups of 10, 8 are left ungrouped. The number they have drawn has 4 tens and 8 units.)

4. Write down two numbers that are smaller than 44, but not smaller than 41. (43, 42, 41)

LESSON 7: MASS

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 4.3 Mass.

Lesson vocabulary: Kilograms, light, heavy, lighter, heavier, estimate, measure, compare, balancing scale, record, order, compare, mass.

Prior knowledge:
Learners should have been taught how to:

- Estimate, measure compare, order and record mass using non-standard measures and a balancing scale, e.g. blocks, bricks, etc.
- Use language to talk about the comparison, e.g. light, heavy, lighter, heavier.

Concepts:

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures, e.g. blocks, bricks, etc.
- Use language to talk about the comparison, e.g. light, heavy, lighter, heavier.
- Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour.
- Measure own mass in kilograms using a bathroom scale.

Resources: Balancing scales for each group (make your own if necessary), Unifix cubes, objects to measure mass (e.g. pencil case, book, ruler, cup, etc.).

DBE workbook activities relevant to this lesson:

- DBE worksheet 43 (p. 92).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners a balancing scale. Note that you may use the hanger balancing scale instead of a commercial balancing scale. Give learners a variety of classroom objects to weigh such as: pencils, crayons, books, erasers. Make use of the same objects to compare it with. For example, compare all the objects with blocks, not some with blocks and some with marbles.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s from 40 to 100.

1.2 Mental mathematics activity (10 minutes)

	What is 1 less than:	Answer
1.	42	41
2.	30	29
3.	45	44
4.	12	11
5.	10	9

	What is 1 more than:	Answer
6.	49	50
7.	43	44
8.	2	3
9.	15	16
10.	12	13

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

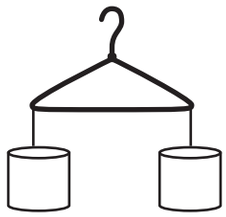
3. Lesson content – concept development (30 minutes)

In this activity you will use non-standard units. You need to use something like Unifix cubes as the non-standard unit. If you do not have enough Unifix cubes to do this you should use some other item, of which you have a lot, for example, bottle tops that you have collected. The bottle tops should all be of the same type (e.g. all plastic or all metal). First you demonstrate to the whole class how to use the scale and then they work in groups to experience the measuring themselves.

Learners should have measured using non-standard units before in Term 1 and also in Grade 1. While you do this activity with the class you are revising the process of measuring by counting a certain number of units. Estimation is an important part of this activity. Learners need to develop the ability to make a good approximation (near answer) of a measurement.

Activity 1: Whole class activity

Draw the table shown below on the board before the lesson.
Make a balancing scale: Use a wire hanger from which you hang empty yoghurt tubs (preferably the larger size ones) on either side.



- Place an object such as a pencil case in the tub on the one side.
- Ask the learners to estimate how many Unifix cubes (non-standard units) they think will go into the tub on the other side to balance it.
- Record the class's estimation of the measurement using non-standard units.
- Use Unifix cubes to balance the scale while the learners watch and count with you the number of Unifix cubes used to create the balance.
- Record the class's actual measurement of the mass of the pencil case using non-standard units. The mass of the pencil case is __ Unifix cubes.
- Learners should now copy this table on the board to record the findings and to compare the estimations with the measurements when they measure the rest of the objects in the group activity that follows:

	Mass in Unifix cubes		
	I estimate	**I measure**	**Difference**
Pencil case			
Book			
Ruler			
Cup			
?			
?			

Activity 2: Learners work in groups

Continuation of whole class activity in small groups. Learners now work in groups – each group needs a balancing scale.

- Use a balancing scale and place other objects on the one side of the scale.
- Estimate how many Unifix cubes (non-standard units) will go into the tub on the other side to balance it.
- Use Unifix cubes to balance the scale and count the number of Unifix cubes used to create the balance.
- Complete the columns in the table, using the measurements of the objects used for this activity.

Activity 3: Whole class activity

- Discuss the findings as a whole class. Learners' estimates and measurements might differ.
- Discuss the importance of good estimates.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 7: Mass

Classwork

1. Put one apple on the balancing scale and Unifix cubes on the other side. How many cubes do you need to make the scale balance? (Answers will vary.)

2. Draw a balancing scale: on the one side draw 10 blocks. What will you draw on the other side to make it balance? (10 blocks.)

3. Draw a balancing scale: on the one side draw 1 group of ten blocks and 5 extra blocks. How many individual blocks will you draw on the other side to make it balance? (15 individual blocks.)

4. Draw a balancing scale to show one item lighter than another item. (Drawing not shown. Answers will vary – check. The scales will not balance – if one object is lighter than the other in the scale, the one side of the scale will be higher than the other side.)

5. How do you know which item is lighter on a balancing scale? (The scale tilts up on the side of the lighter object.)

Homework

1. Draw a balancing scale: on the one side draw 2 blocks. What will you draw on the other side to make it balance? (2 blocks.)

2. Draw a balancing scale: on the one side draw 5 blocks. What will you draw on the other side to make it balance? (5 blocks.)

3. Draw a balancing scale to show one item heavier than another item. (Drawing not shown. Answers will vary – check. The scales will not balance – if one object is heavier than the other in the scale, the one side of the scale will be lower than the other side.)

4. How do you know which item is heavier on a balancing scale? (The scale tilts down on the side of the heavier object.)

LESSON 8: MASS

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 4.3 Mass.

Lesson vocabulary: Mass, kilograms, light, heavy, lighter, heavier, estimate, measure, compare, balancing scale, estimate, non-standard, record, order, compare, comparison, scale.

Prior knowledge:
Learners should have been taught how to:

- Estimate, measure, compare, order and record mass using non-standard measures and a balancing scale, e.g. blocks, etc.
- Use language to talk about the comparison, e.g. light, heavy, lighter, heavier.

Concepts:

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks, etc.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.
- Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour.
- Measure own mass in kilograms using a bathroom scale. The expectation is that learners only read to the nearest whole kilogram.

Resources: Balancing scale, objects to compare mass (e.g. board duster, box of crayons, etc.), bathroom scale, packaged items to compare and add given masses (e.g. bag of rice, tea, mielie meal etc.).

DBE workbook activities relevant to this lesson:

- DBE worksheet 43 (p. 93).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners two objects, e.g. 8 kg sugar and 2 kg rice, and ask learners how much they weigh together. Learners first find the mass of the objects separately and discuss what they found. *Which is heavier?/Which is lighter?/Name some other heavy/light objects*. They then calculate the total mass of the two objects together. Put the two objects on the scale together to see if the answer is correct. Do the same with different pairs of objects.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 0 and 45.

1.2 Mental mathematics activity (10 minutes)

	What is 3 more than:	Answer
1.	40	43
2.	3	6
3.	23	26
4.	14	17
5.	45	48

	What is 3 more than:	Answer
6.	12	15
7.	30	33
8.	27	30
9.	44	47
10.	31	34

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

In this lesson you continue to consolidate the process of measuring using non-standard units. You also give learners the opportunity to learn and practice using the mathematical vocabulary of measurement of mass. You then introduce one of the standard units of mass – the kilogram. Discuss the value of the standard unit – showing how this will allow everyone to get the same measurement for an object, instead of different measurements, like we get when measuring using non-standard units.

Activity 1: Whole class activity

- Using a balancing scale compare the mass of the following objects to see which one is heavier/lighter.
- Put one object on either side of the balancing scale.
- Compare their masses based on what you see:
  - *Which is heavier?* (The heavier object will hang lower than the lighter object.)
  - *Which is lighter?* (The lighter object will hang higher than the heavier object.)
- Use objects such as a board duster, a box of crayons and a school lunch box together.

Activity 2: Whole class activity

- In this activity you start to work with standard units of measurement (kg).
- Ask the class to explain the different between *light* and *heavy* objects. They should use pairs of objects to give their explanations.
- *E.g. I am heavy but my book is light. The teacher's desk is heavy but her chair is light.*
- Put the following in front of the learners so that they are clearly visible to all: 10 kg mealie meal, 5 kg sugar and 2 kg rice (or any other products of the same mass).
- *Which of the packages you have shown them is heavy? Which is light?*
- *Use any pair of items in a sentence with the word heavier/lighter.*
- What is the mass of these items together? (17 kg)
- Discuss kilograms as a unit of measurement. (It is a standard unit.)

Activity 3: Learners work in groups

Do this activity allowing individuals from each group to find their mass while the rest of the class starts the classwork activity. Call the learners to the front of the class, one group at a time, so that they all get the chance to find their mass using the scale.

- Use bathroom scale. Get each learner to come up to the front and measure their mass.
- *What is your mass in kilograms?*
- You don't have to record their masses on the board. This is not a comparison exercise but rather one to establish understanding of mass and how to read your mass on a scale.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 8: Mass

Classwork

1. Draw the following products with a different mass:
   a) 2 kg rice, 5 kg potatoes, 10 kg mealie meal, 1 kg sugar.
   b) Write down the mass of each product.

2. Use the products/pictures from Question 1 to complete the following:
   a) Mom bought mealie meal and rice. What is the total mass of her products? (12 kg)
   b) I bought some rice, sugar and potatoes. What is the total mass of my products? (8 kg)
   c) Dad bought sugar and mealie meal. What is the total mass of his products? (11 kg)
   d) My sister bought mealie meal, sugar and rice. What is the total mass of her products? (13 kg)

Homework

(The answer here will vary according to the products the learners find. Take some time to discuss the learners' work and check the addition that follows.)

1. Find and draw 3 products with a different mass in your kitchen at home, e.g. flour, sugar, mealie meal. Write the mass next to the picture.

2. Complete these sentences, using the products from your kitchen.
   a) Mom bought _____ and _____. The total mass is _____ kg.
   b) Dad bought _____ and _____. The total mass is _____ kg.
   c) I bought _____, _____ and _____. The total mass is _____ kg.

WEEK 3

LESSON 9: FAMILY FACTS 0–50

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.3 Number symbols and number names, 1.16 Mental mathematics.

Lesson vocabulary: Forwards, backwards, family facts, addition, subtraction, number line, small demarcations.

Prior knowledge:
Learners should have been taught how to:

- Use apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20.
- Add and subtract up to 20 as well as using the appropriate symbols: +, –, =, ☐

Concepts:

- Use techniques when solving problems and explain solutions to problems, like drawing or apparatus and number lines.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 50.

Resources: Base ten blocks (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 35 (pp. 72 and 73).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Support learners with regards to the family facts of 24. First ask them to give you any two numbers that will make 24, e.g. 19 + 5 = 24. Show this family fact using base ten blocks. Ask them to count out 36 base ten blocks. Take 7 away. *How many blocks do you have left?* (29) Use the 36 base ten blocks again and take 29 away. *How many blocks do you have left?* (7) Explain the working with the tens and units when you have to exchange in order to subtract.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 0 and 40. A number chart may be used.

1.2 Mental mathematics activity (10 minutes)

	What is 2 less than:	Answer
1.	45	43
2.	50	48
3.	32	30
4.	30	28
5.	12	10

	What is 2 more than:	Answer
6.	40	42
7.	22	24
8.	31	33
9.	45	47
10.	39	41

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

This lesson starts with revision of the number bonds (family facts) of ten. You should not spend too long on the revision as it is important to get onto the activities where the higher range number operations are done.

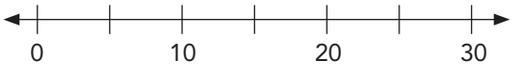
Activity 1: Whole class activity

- Draw a 0–10 number line on the board.

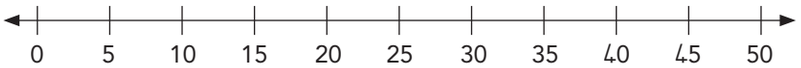
- Complete the labelling of the number line with your class.
- Discuss how to work out what each marker should be labelled. (Count the number of gaps.)
- Ask learners to give you any two numbers that make 10, e.g. 8 + 2 = 10, 5 + 5 = 10.
- Explain: *These pairs of numbers are called the number bonds of ten. We also call them family facts, since they fit together like a family to make a whole.*
- Systematically list all of the number bonds of ten on the board, showing the jumps on the number line as you do so. (Start at 0 + 10 = 10, then 1 + 9 = 10, 2 + 8 = 10, etc. up to 10 + 0 = 10.)

Activity 2: Whole class activity

- Draw the 0–30 and a 0–50 number lines on the board. Label one in 10s and one in 5s.
- Ask learners to give you any two numbers that make 30, e.g. 28 + 2 = 30, 25 + 5 = 30.
- Go to the 0–30 number line that you drew on the board and show the jumps for making up:
  - 28 + 2 = 30
  - 25 + 5 = 30



- Show that there are MANY ways you can take two jumps to get from 0 to 30 – each of these pairs is a *family fact* of 30.
- Count out the steps in the addition on the number line if necessary to make sure the learners do understand that you are adding.
- Ask: *Can we find family facts of 40 and 50?* (Remember that there are plenty of family facts for 30, 40 and 50.)
- Go to the 0–50 number line that you drew on the board and show the jumps.
- You should allow learners to suggest any pair of numbers that add up to 40 or 50, showing them on the number line each time.



Activity 3: Learners work in groups

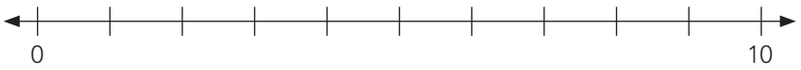
- Explain to the learners that they can find family facts (pairs of numbers that add up to another number) for any number – so far in this lesson you have found family facts for 10, 30, 40 and 50. In their groups they will now find family facts for the number 28. (You could do this for other numbers of your choice.)
- Give an example of a family fact for 28, e.g. 21 + 7 = 28; 15 + 13 = 28.
- Learners should work together to find as many other family facts for 28 as they can.
- They must record their family facts in their mathematics books.
- Discuss some of the family facts that they found.
- If some learners found 21 + 7 = 28 and others found 7 + 21 = 28 – discuss this as it represents the commutative law of addition. (Learners do not have to know the law but they should recognise it in action.)

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

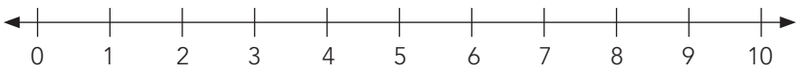
Term 2 Lesson 9: Family facts 0–50

Classwork

1. Draw and label a 0–10 number line and list all of the number bonds of 10.

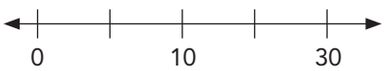


(Learners must copy and label the number line from 0–10.



The full set of number bonds of ten is:
0 + 10 = 10
1 + 9 = 10
2 + 8 = 10
3 + 7 = 10
4 + 6 = 10
5 + 5 = 10
6 + 4 = 10
7 + 3 = 10
8 + 2 = 10
9 + 1 = 10
10 + 0 = 10)

2. Draw and label a 0 to 30 number line and show four different family facts of 30.



(Answers will vary, e.g. 10 + 20 = 30; 25 + 5 = 30, 21 + 9 = 30, 12 + 28 = 30, etc.)

3. Write down ten family facts for 25. (Answers will vary, e.g. 20 + 5 = 25, 15 + 10 = 25, etc.)

Homework

1. Draw and label a 0 to 40 number line and show 10 different family facts of 40. (Answers will vary, e.g. 35 + 5 = 40, 15 + 25 = 40, etc.)

2. Write down ten family facts for 47. (Answers will vary, e.g. 20 + 27 = 47, 45 + 2 = 47, etc.)

LESSON 10: ADDITION – DOUBLES AND NEAR DOUBLES UP TO 50

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.7, 1.13 Addition and subtraction, 1.12 Techniques (methods or strategies), 1.16 Mental mathematics.

Lesson vocabulary: Just after, doubles, near doubles, doubling and halving.

Prior knowledge:
Learners should have been taught how to:

- Use concrete apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20, using the appropriate symbols: +, –, =, □

Concepts:

- Compare numbers up to 50.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, –, =, □
- Use techniques when performing calculations, like drawing, concrete apparatus and doubling and halving.

Resources: Unifix cubes.

DBE workbook activities relevant to this lesson:

- DBE worksheet 45 (pp. 96 and 97).
- DBE worksheet 46 (pp. 98 and 99).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Place 50 Unifix cubes on each learner's desk. Ask them to put 16 cubes in a group and to put 17 cubes in a second group. Ask the learners to make the groups the same and to put any extra cubes aside. Ask them to write a number sentence. (16 + 16 + 1). We can also say: double 16 + 1. Do this for other doubles and near doubles – adding pairs of numbers that give totals less than 50.

Problem solving: *I bought two pairs of slip slops. One pair costs R22 and the other pair R23. How much did I pay?* Show it using Unifix cubes.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 65 to 150.

1.2 Mental mathematics activity (10 minutes)

	What number comes just after:	Answer
1.	14	15
2.	23	24
3.	12	13
4.	45	46
5.	36	37

	What number comes just after:	Answer
6.	49	50
7.	16	17
8.	1	2
9.	30	31
10.	24	25

2. Correction/reflection on homework (15 minutes)

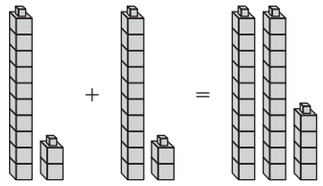
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

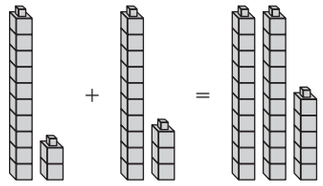
Show learners near doubles by giving them Unifix cubes and doing drawings on the board.

- Revise doubles with your learners orally.
- Ask them how we would write double 12 as a number sentence. (12 + 12 =)
- Ask them what 12 + 12 is. Show it using the Unifix cubes. (12 cubes + 12 cubes = 24)



Activity 2: Whole class activity

- Ask learners how they think will we write 12 + 13 using doubles. (Double 12 + 1)
- Show learners the solution with Unifix cubes.



Activity 3: Learners work in pairs

- In this activity learners calculate doubles and near doubles building on the first two activities of the lesson.
- Calculate 13 + 13 = 26 and 13 + 14 = 27.
- *What did you notice?* (13 + 14 is double 13 + 1)
- Calculate 14 + 14 = 28 and 14 + 15 = 29.
- *What did you notice?* (14 + 15 is double 14 + 1)
- Give them more examples – ask groups to tell you their answers. Make sure learners understand how to use doubles to help them to add near doubles.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 10: Addition – doubles and near doubles up to 50

Classwork

Do the following questions in your mathematics book.

1. Complete the following pairs of sums:
   a) 1 + 1 = (2) 1 + 2 = (3)
   b) 2 + 2 = (4) 2 + 3 = (5)
   c) 3 + 3 = (6) 3 + 4 = (7)
   d) 4 + 4 = (8) 4 + 5 = (9)
   e) 5 + 5 = (10) 5 + 6 = (11)
   f) 6 + 6 = (12) 6 + 7 = (13)
   g) 7 + 7 = (14) 7 + 8 = (15)
   h) 8 + 8 = (16) 8 + 9 = (17)
   i) 9 + 9 = (18) 9 + 10 = (19)
   j) 10 + 10 = (20) 10 + 11 = (21)

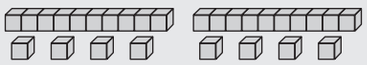
2. Write number sentences:
   a) 24 blocks + 24 blocks. (24 + 24 = 48)
   b) 24 blocks + 23 blocks. (24 + 23 = 47)

3. Double 15 (15 + 15 = 30) Double 15 + 1 (15 + 15 + 1 = 31)

4. Double 17 (17 + 17 = 34) Double 17 + 1 (17 + 17 + 1 = 35)

Homework

1. Draw the following in blocks: (Learners could draw the blocks – one illustration example is given.)
   a) 14 + 14, 14 + 15



   b) 17 + 17, 17 + 18

2. Double:
   a) 19 (19 + 19 = 38)
   b) 18 (18 + 18 = 36)
   c) 23 (23 + 23 = 46)
   d) 20 (20 + 20 = 40)

3. Double 19 + 1 (19 + 19 + 1 = 39)

4. Double 21 + 1 (21 + 21 + 1 = 43)

5. Double 18 + 1 (18 + 18 + 1 = 37)

6. Write as a doubles number sentence: 15 + 14 = (Double 15 – 1 or double 14 + 1)

LESSON 11: ADDITION – BUILDING AND BREAKING DOWN NUMBERS 1–50

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.7, 1.13 Addition and subtraction, 1.12 Techniques (methods or strategies), 1.16 Mental mathematics.

Lesson vocabulary: More, less, building up, breaking down, addition, subtraction, number bonds.

Prior knowledge:
Learners should have been taught how to:

- Use concrete apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20, using the appropriate symbols: +, –, =, □
- Work with number bonds up to 10.

Concepts:

- Compare numbers up to 50.
- Use techniques when performing calculations, like building up and breaking down numbers.

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*), beads and string (optional).

DBE workbook activities relevant to this lesson:

- DBE worksheet 37 (pp. 76 and 77)

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Building up/breaking down using multiples of 10. Use base ten blocks: give learners 4 tens and 4 ones. Discuss how this forms the number 44. Write a number sentence. (40 + 4 = 44) Remove the units. Write a number sentence. (44 – 4 = 40) Do the same using base ten blocks: 41: 40 + 1 = 41 or 41 – 1 = 40. Also discuss 42: 40 + 2 = 42 or 42 – 2 = 40/43: 40 + 3 = 43 or 43 – 3 = 40/44: 40 + 4 = 44 or 44 – 4 = 40.

Problem solving: *My mother bought 40 sweets. She bought 3 more for my friends. How many sweets did she buy altogether?* Show the number with your base ten blocks. (40 + 3 = 43)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 10s from 0 to 100.

1.2 Mental mathematics activity (10 minutes)

		Answer
1.	What is 3 less than 41?	38
2.	What is 2 more than 33	35
3.	What is 3 more than 23?	26
4.	What is 1 more than 18?	19
5.	What is 2 less than 21?	19

		Answer
6.	What is 3 more than 42?	45
7.	What is 3 less than 21?	18
8.	What is 2 less than 31?	29
9.	What is 1 more than 49?	50
10.	What is 2 more than 48?	50

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

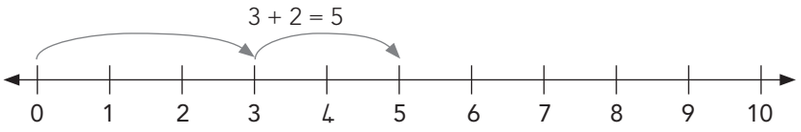
3. Lesson content – concept development (30 minutes)

This lesson again starts with revision – in the first activity you revise adding numbers that make five and you write the number sentences to show the addition. You should **not spend too long on the revision** as it is important to get onto the activities where the higher range number operations are done.

Activity 1: Whole class activity

Draw a 0–10 number line on the board before the lesson.

- Use number lines to do the following activities with your learners.
- Ask them for as many number sentences as they can, with five as the answer.
  - E.g. 3 + 2 = 5, 4 + 1= 5, 1 + 2 + 2 = 5, 3 + 1 + 1 = 5.
  - Illustrate these combinations on the number line. E.g. 3 + 2 = 5.



Activity 2: Learners work in groups

- Explain to the class: *We are going to look at different ways of breaking down numbers into tens and units and writing this as a number sentence.*
- Write the number 46 on the board.
- Ask the learners how they would break it down into tens and units and write this as a number sentence.
- Discuss all of the following possibilities.
  - 10 + 10 + 10 + 10 + 6 = 46. (This can be called building up to 46 using addition OR breaking down 46 into tens and units.)
  - 40 + 6 = 46

    (Show this using flard cards like this.)
- Ask: *How can we write this using tens and units?*
  - *We write* 4 tens + 6 units or 4 tens and 6 units.
- Repeat with other numbers, e.g. 35, 42, 23, 54, 17.
- Each time show:
  - The sum of all the tens and units, e.g. 35 = 10 + 10 + 10 + 5.
  - The sum of the tens and units in symbols and illustrate with flard cards, e.g. 35 = 30 + 5.
  - Writing the tens and unit sums using words, e.g. 3 tens and 5 units = 35 or 3 tens + 5 units = 35.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 11: Addition – building up and breaking down numbers 1–50

Classwork

1. Draw flard cards to show the following:
   a) 30 + 4 = 34. (3 4)

   b) 4 tens + 2 units. (4 2)

   c) 5 tens + 6 units. (5 6)

2. Write the following in words and then as a number sentence:
   a) 4 tens + 6 units = forty-six.
   b) __ tens + __ units = __. (4 tens + 6 units = 46)
   c) __ + __ = __. (40 + 6 = 46)

3. Write the words and then the answer for the following:
   a) 3 tens + 1 unit = __. (31)
   b) 4 tens + 3 units = __.(43)
   c) 5 tens + 8 units = __. (58)

4. Complete the following:
   a) 34 = __ + __. (30 + 4)
   b) 42 = __ + __. (40 + 2)
   c) 58 = __ + __. (50 + 8)

Homework

1. Write the answer in words: 3 tens + 3 units = __. (thirty-three)

2. 4 tens + 7 units = __. (47)

3. 41 = __ + __. (40 + 1)

4. 55 = __ + __. (50 + 5)

LESSON 12: ADDITION USING BREAKING DOWN

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.7, 1.13 Addition and subtraction, 1.12 Techniques (methods or strategies), 1.16 Mental mathematics.

Lesson vocabulary: More, less, building up, breaking down, addition, subtraction, number bonds.

Prior knowledge:
Learners should have been taught how to:

- Use concrete apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20, using the appropriate symbols: +, –, =, □
- Work with number bonds up to 10.

Concepts:

- Compare numbers up to 50.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, –, =, □
- Practice number bonds up to 50.
- Use techniques when performing calculations, like building up and breaking down numbers.

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*), beads and string (optional).

DBE workbook activities relevant to this lesson:

- N/A

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Building up/breaking down using multiples of 10. Use base ten blocks: give learners 5 tens and 4 ones. Discuss how this forms the number 54. Write a number sentence. (50 + 4 = 54) Remove the units. Write a number sentence. (54 – 4 = 40) Do the same using base ten blocks: 51: 50 + 1 = 51 or 51 – 1 = 50. Also discuss 52: 50 + 2 = 52 or 52 – 2 = 50/53: 50 + 3 = 53 or 53 – 3 = 50/54: 50 + 4 = 54 or 54 – 4 = 50.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 10s from any given multiple between 0 and 150.

1.2 Mental mathematics activity (10 minutes)

	What is one more than:	Answer
1.	40 + 9	50
2.	30 + 2	33
3.	10 + 5	16
4.	20 + 5	26
5.	40 + 1	42

	What is one less than:	Answer
6.	50	49
7.	20 + 2	21
8.	10 – 8	1
9.	30 + 6	35
10.	30	29

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

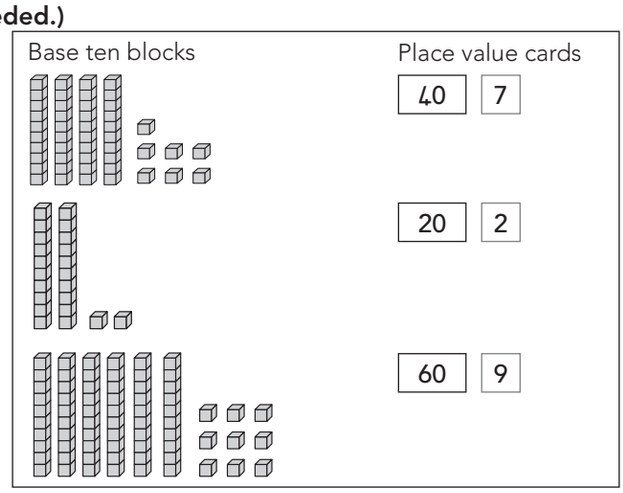
3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Demonstrate the two different strategies, using base ten blocks and flard cards. **(Learners should choose the right method when they need to break down the numbers. When the two digits in the units column add up to more than ten, regrouping is needed.)**
- **Method 1:** 47 + 22 = __
- Lay out the blocks or cards
- 47 + 22
- Talk about how the blocks and the cards show the breaking down and can be used to show grouping of tens and units
  = (40 + 7) + (20 + 2)
  = (40 + 20) + (7 + 2)
  = 60 + 9 = 69

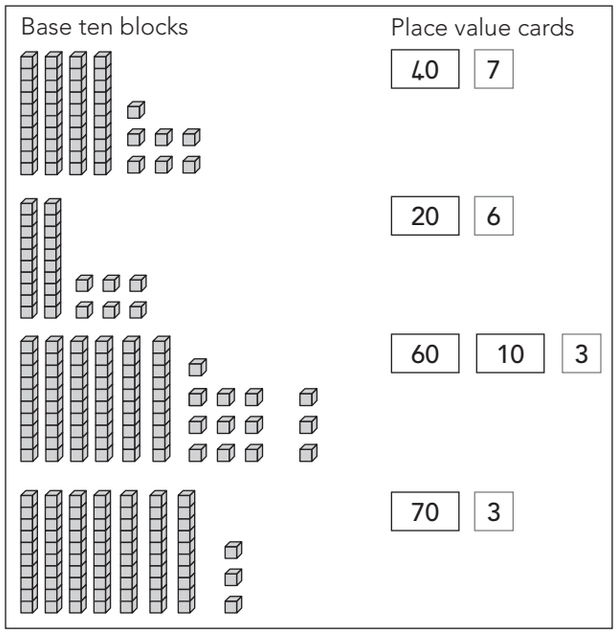
(Here you can add straight away without difficulty.)

NOTE: Learners must be confident doing subtraction like this before moving on to examples like the next one. Do more examples like it if necessary before you move on to the next type.



- **Method 2:** 47 + 26 = __
- Lay out the blocks or cards
- 47 + 26
- Talk about how the blocks and the cards show the breaking down and can be used to show grouping of tens and units
  = (40 + 7) + (20 + 6)
  = (40 + 20) + (7 + 6)
  = 60 + 13
  = (60 + 10) + 3
  = 70 + 3

(Regroup the units in 13 to make 1 ten plus 3 units, so that you can do the addition.)



Activity 2: Learners work in groups

- Allow learners to work on these two examples in their groups, using the methods you just demonstrated. You should circulate to check that they understand and are doing the correct working. Help learners if they need further explanations.
- Addition – breaking down the numbers

Example 1: **Method 1**
53 + 25 = ___
= (50 + 3) + (20 + 5)
= (50 + 20) + (3 + 5)
= 70 + 8
= 78

Example 2: **Method 2**
38 + 29= ___
= (30 + 8) + (20 + 9)
= (30 + 20) + (8 + 9)
= 50 + (17)
= 50 + (10 + 7)
= 67

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 12: Addition using breaking down

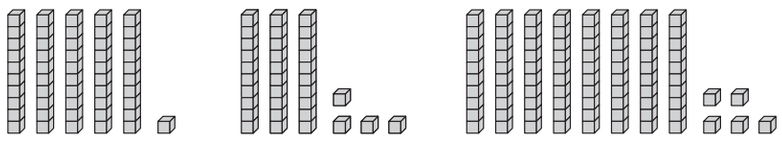
When learners do addition using breaking down they might not write the working in exactly the same way. You need to check all of the steps in their working to decide whether or not it is correct as there is not only one correct method. All correct working should be accepted. Learners should be encouraged to work efficiently and correctly.

The solutions to the classwork activity given below are shown using Diene's blocks. You could show this by doing a numeric calculation using brackets or by using flard cards. The solutions to the homework are given using numeric calculations.

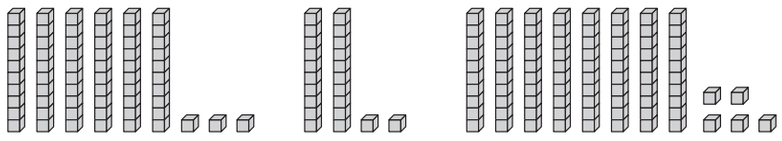
Classwork

Solve the following by breaking down numbers. You can draw base 10 blocks to help you.

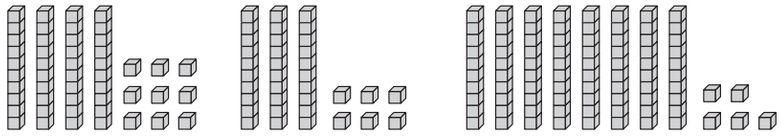
1. 51 + 34 = ___. (85)



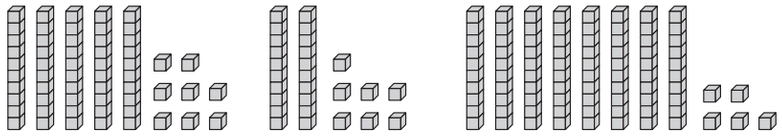
2. 63 + 22 = ___. (85)



3. 49 + 36 = ___. (85)



4. 58 + 27 = ___. (85)



Homework

Solve the following by breaking down numbers. You can draw base 10 blocks to help you.

1. 45 + 23 = ___. (45 + 23 = (40 + 20) + (5 + 3) = 60 + 8 = 68)

2. 56 + 36 = ___. (56 + 36 = (50 + 30) + (6 + 6) = 80 + (12) = 92)

WEEK 4

LESSON 13: SUBTRACTION USING BREAKING DOWN

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.7, 1.13 Addition and subtraction, 1.12 Techniques (methods or strategies), 1.16 Mental mathematics.

Lesson vocabulary: Just before, building up, breaking down, addition, subtraction, number bonds.

Prior knowledge:
Learners should have been taught how to:

- Use concrete apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 20, using the appropriate symbols: +, –, =, ☐
- Work with number bonds up to 10.

Concepts:
- Compare numbers up to 50.
- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, –, =, ☐
- Practice number bonds up to 50.
- Use techniques when performing calculations, like building up and breaking down numbers.

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:
- DBE worksheet 38 (pp. 78 and 79).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners base ten blocks. Ask them to solve the following using base ten blocks. *My friend bought 38 sweets for the party. We ate 26. How many sweets are left?* (12) *My mother gave me 43 marbles. I lost 25 in a game. How many marbles do I have left?* (18) Work with the blocks showing your learners how to break down the tens and units when necessary in order to subtract correctly.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s from 60 to 120.

1.2 Mental mathematics activity (10 minutes)

	What number comes just before:	Answer
1.	12	11
2.	45	44
3.	50	49
4.	15	14
5.	24	23

	What number comes just before:	Answer
6.	1	0
7.	49	48
8.	18	17
9.	37	36
10.	6	5

2. Correction/reflection on homework (15 minutes)

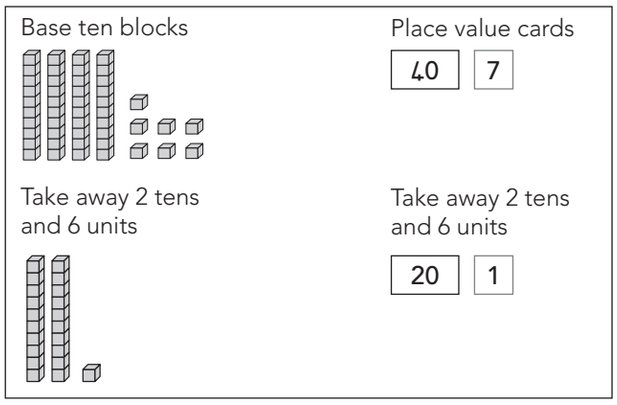
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

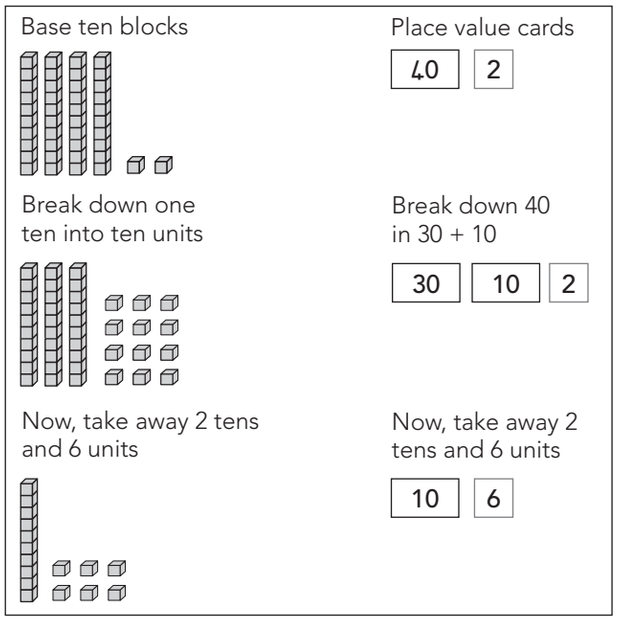
- Demonstrate the following two different strategies, using base ten blocks and flard cards. **(Learners should choose the right method when they need to break down the numbers. When the units digit in the second number is bigger than the units digit in the first number, extra breaking down is needed.)**
- **Method 1:** 47 – 26 = __
- Lay out the blocks or cards
- 47 – 26
- Talk about how the blocks and the cards show the breaking down and can be used to show grouping of tens and units
  = (40 + 7) – (20 + 6)
  = (40 – 20) – (7 – 6)
  = 20 + 1 = 21

(Here you can subtract straight away without difficulty. Learners must be able to do examples like this with confidence before they move on to the next kind of activity.)



- **Method 2:** 42 – 26 = __
- Lay out the blocks or cards
- 42 – 26
- Talk about how the blocks and the cards show the breaking down and can be used to show grouping of tens and units
  = (40 + 2) – (20 + 6)
  = (30 + 10 + 2) – (20 + 6)
  = (30 – 20) + (12 – 6)
  = 10 + 6
  = 16

(Break down the one ten from the 42 so that you can do the subtraction. Use the blocks to show how the breaking down happens.)



Activity 2: Learners work in groups

- Allow learners to work on these two examples in their groups, using the methods you just demonstrated. You should circulate to check that they understand and doing the correct working. Help learners if they need further explanations.
- Subtraction – breaking down the numbers.

Example 1: (no extra breaking down needed)
38 – 25 = ___
= (30 + 8) – (20 + 5)
= (30 – 20) + (8 – 5)
= 10 + 3
= 13

Example 2: (extra breaking down needed)
43 – 25 = ___
= (40 + 3) – (20 + 5)
= (30 + 10 + 3) – (20 + 5)
= (30 – 20) + (13 – 5)
=10 + 8)
= 18

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 13: Subtraction using breaking down

When learners do subtraction using breaking down they might not write the working in exactly the same way. You need to check all of the steps in their working to decide whether or not it is correct as there is not only one correct method. All correct working should be accepted. Learners should be encouraged to work efficiently and correctly.

The solutions given below are written using tens and units. You could show this using Diene's blocks or by showing the numeric calculation using brackets.

Classwork

Solve the following by breaking down numbers. You can draw base 10 blocks to help you.

1. 48 – 21 = ___. (4 tens and 8 units minus two tens and 1 unit = 2 tens and 7 units = 27)

2. 46 – 25 = ___. (4 tens and 6 units minus two tens and 5 units = 2 tens and 1 unit = 21)

3. 48 – 27 = ___. (4 tens and 8 units minus two tens and 8 units = 2 tens and 1 units = 21)

4. 37 – 19 = ___. (3 tens and 7 units minus 1 ten and 9 units = 2 tens and 7 units minus 9 units = 1 ten and 17 units minus 9 units = 18)

Homework

Solve the following by breaking down numbers. You can draw base 10 blocks to help you.

1. 45 – 23 = ___. (22)

2. 47 – 28 = ___. (19)

LESSON 14: MORE SUBTRACTION

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.12 Techniques – methods or strategies, 1.13 Addition and subtraction, 1.16 Mental mathematics.

Lesson vocabulary: Building up, breaking down, addition, subtraction, number bonds, appropriate symbols.

Prior knowledge:
Learners should have been taught how to:

- Use techniques like concrete apparatus, pictures, number lines, breaking down and building up of numbers when solving and explaining problems and performing calculations.
- Add to 99, subtract from 99 using the appropriate symbols: –, =, □
- Work with number bonds up to 20.

Concepts:
- Use techniques when performing calculations, like building up and breaking down numbers, add to 50, subtract from 50 and using the appropriate symbols –, =, □

Resources: Base ten blocks (see *Printable Resources*), flard cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:
- DBE worksheet 41 (pp. 86 and 87).
- DBE worksheet 42a and 42b (pp. 88–91).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners base ten blocks. Ask them to solve the following using their base ten blocks. *My friend bought 38 sweets for the party. We ate 26. How many sweets are left?* (12) *My mother gave me 43 marbles. I lost 25 in a game. How many marbles do I have left?* (18)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 60, count backwards in threes to 42.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	11 + __ = 18	7
2.	12 + __ = 20	8
3.	13 + __ =16	3
4.	14 + __ = 20	6
5.	15 + __ = 18	3

	Calculate:	Answer
6.	16 + __ = 19	3
7.	17 + __ = 20	3
8.	0 + __ = 5	5
9.	19 + __ = 20	1
10.	10 + __ = 10	0

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

This lesson gives you more time to show learners how to do subtraction using breaking down. The CAPS recommends this method. If you know other methods well, you could also teach these to learners. Whatever method you or the learners choose to do subtraction (or addition) calculations is acceptable, as long as the working is correct. You should also be able to explain the calculation correctly to show that you are working with the digits in the different places correctly.

Activity 1: Whole class activity

- Write the following examples on the board and work through them one at a time.
- Demonstrate how to do these examples practically using base ten blocks and flard cards if necessary.
- **Type 1:** Here you can subtract straight away without a need to break down the tens into units.
  47 – 26 = __
  47 – 26
  = (40 + 7) – (20 + 6)
  = (40 – 20) + (7 – 6)
  = 20 + 1 = 21
- **Type 2:** Break down the tens in the 42 so that you can do the subtraction.
  42 – 26 = __
  = (30 + 10 + 2) – (20 + 6)
  = (30 – 20) + (12 – 6)
  = 10 + 6
  = 16
- Do a few more examples with the whole class if necessary, before they work in pairs and then individually using the learner activity book.
- You could allow learners to suggest alternative methods and show the class how these work.
- E.g. 64 – 48 = ___ (16); 81 – 58 = ___ (23) etc.

Activity 2: Learners work in pairs

- Write the following examples on the board and work through them one at a time.
- Let the learners do these examples practically using base ten blocks and flard cards if necessary.
- **Type 1:** Here you can subtract straight away without a need to break down the tens into units.
  87 – 26 = __
  87 – 26
  = (80 + 7) – (20 + 6)
  = (80 – 20) + (7 – 6)
  = 60 + 1 = 61
- **Type 2:** Break down the tens in the 82 so that you can do the subtraction.
  82 – 26 = __
  = (70 + 10 + 2) – (20 + 6)
  = (70 – 20) + (12 – 6)
  = 50 + 6
  = 56

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 14: More subtraction

In the two lessons you have done you have shown learners how to subtract using different methods of breaking down. Learners might use these or other methods to show their calculations. You should check all working done by learners to see that it is correct and accept all correct working.

While you circulate to check learners' work take time to ask them to explain their working to you so that you can listen to the way they talk about it and help them to use the language of place value to talk about their calculations. Some different methods are shown in the solutions below.

Classwork

Use two different methods each time to calculate the following:

1. 69 – 24 = (45)
   (60 + 9) – (20 + 4) = (60 – 20) + (9 – 4) = 40 + 5 = 25
   or
   69 (I put the numbers into columns using place value.)
   <u>24</u> – (Subtract, starting with the units. Then subtract the tens.)
   25

2. 95 – 48 = (47)
   (80 + 10 + 5) – (40 + 8) = (80 – 40) + (10 + 5 – 8) = 40 + (15 – 8) = 40 + 7 = 47
   or
   95 = 90 + 5 = 80 + 10 + 5 (I break down the two numbers)
   <u>48</u> – = 40 + 8 = 40 + 3 + 5 (I have to break down the 8 as well)
   47 = 40 + 7 = 47 (Subtract the tens and units)

3. 53 – 31 = (22)
   (50 + 3) – (30 + 1) = (50 – 30) + (3 – 1) = 20 + 2 = 22
   or
   53 (I put the numbers into columns using place value.)
   <u>21</u> – (Subtract, starting with the units. Then subtract the tens.)
   22

4. 74 – 39 = (35)
   (74 – 39) = (60 + 10 + 4) – (30 + 9) = (60 – 30) + (10 + 4 – 9) = 30 + (14 – 9) = 30 + 5 = 35
   or (I cannot subtract 9 units from 4 units.)
   6 1
   7 4 (I break down the 7 tens from the tens column into 6 tens and ten units.)
   <u>39</u> – (I add the 10 units to the 4 units in the units column to get 14 units.)
   35 (Now I can subtract 9 units from 14 units.)
   (After that I can subtract 3 tens from the remaining 7 tens.)

Homework

Use two different methods each time to calculate the following:

1. 45 – 23 = __ (22)
2. 43 – 26 = __ (17)

LESSON 15: MONEY

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.11 Money, 1.16 Mental mathematics.

Lesson vocabulary: Cents, rands, change, coins, notes, total, change, amongst, between, more, less, share.

Prior knowledge:
Learners should have been taught how to:

- Recognise and identify the South African coins (10c, 20c, 50c, R1, R2, R5) and bank notes (R10, R20).
- Solve money problems involving totals and change to R20 and in cents up to 20c.

Concepts:

- Recognise and identify the South African coins (10c, 20c, 50c, R1, R2, R5) and bank notes (R10, R20, R50).
- Solve money problems involving totals and change in cents up to 50c or rands to R50.

Resources: Money cut-outs (coins and notes) (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- Revision: Doubling DBE worksheet 47 (pp. 100 and 101).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give each learner the cut out coins or coins and notes. Ask them to count the money. Can you divide the R2 coin between two friends? (Yes – R1 each) Do more activities like these with your learners. Use amounts such as R3.00, R4.40 and R5.50.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 10s between 0 and 150.

1.2 Mental mathematics activity (10 minutes)

	What is 3 more than:	Answer
1.	15	18
2.	45	48
3.	27	30
4.	35	38
5.	42	45

	What is 3 less than:	Answer
6.	45	42
7.	27	24
8.	17	14
9.	32	29
10.	3	0

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Discuss with learners the fact that we cannot simply tear notes or break coins when we want to *share* money.
- *How do we share money?* We need to swop the coins or notes for other coins and notes and then share it.

Activity 2: Learners work in groups

- Give each group of learners a collection of money cut-outs (made using the *Printable Resources*).
- When you discuss each example with your learners, remember to ask for alternative answers. There may be more than one correct way to answer these questions.
  - Share a R10 note between two children.
  - *What will they each get?* (A R5 coin each.)
  - *Is there any money left?* (No.)
  - *Is there another way we can share this?* (Yes, e.g. one gets R5 and one gets R2 + R2 + R1.)
  - Share a R5 coin between two children.
  - *What will they each get?* (A R2 coin and 50c each.)
  - *Is there any money left?* (No.)
  - *Is there another way we can share this?* (Discuss different answers.)
  - Share a R10 note amongst three children.
  - *What will they each get?* (A R2, R1, 20c, 10c each.)
  - *Is there any money left?* (10c)
  - *Is there another way we can share this?* (Discuss different answers.)
  - Discuss other amounts of money and sharing them among different size groups of learners.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 15: Money

Classwork

Solve the following problems by drawing the pictures. If there is any money left draw it.

1. Share R10 equally between two friends. (R5 each.)
2. Share R9 equally between two friends. (R4,50 each.)
3. Share R20 equally amongst five friends. (R4 each.)
4. Share R9 equally amongst three friends. (R3 each.)
5. Share R17 equally amongst three friends. (R5,60 each 20c left.)

Homework

Draw pictures to help you solve these problems.

1. Share R15 equally amongst three friends. (R5 each.)
2. Share R16 equally amongst five friends. (R3,20 each.)
3. Share R24 equally amongst four friends. (R6 each.)

LESSON 16: MONEY PROBLEMS

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.11 Money, 1.16 Mental mathematics.

Lesson vocabulary: Cents, rands, change, coins, notes, total, change, more, less.

Prior knowledge:
Learners should have been taught how to:

- Recognise and identify the South African coins (10c, 20c, 50c, R1, R2, R5) and bank notes (R10, R20).
- Solve money problems involving totals and change to R20 and in cents up to 20c.

Concepts:

- Recognise and identify the South African coins (10c, 20c, 50c, R1, R2, R5) and bank notes (R10, R20, R50).
- Solve money problems involving totals and change in cents up to 50c or rands to R50.

Resources: Money cut-outs (coins and notes) (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- Revision: Doubling DBE worksheet 48 (pp. 102 and 103).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners cut-out coins and notes to use when doing the following activities. I have the following in my purse: (R8/R10/R10/R20). I want to pay a certain amount: (R5/R8/R6/R12). What will be left? (R3/R2/R4/R8) Learners use notes and coins to show their answers. Guide learners where they need to exchange bigger values for smaller values using coins.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count from 0–150 in ones. Learners jump at multiples of 5.

1.2 Mental mathematics activity (10 minutes)

	What is 2 more than:	Answer
1.	5	7
2.	10 + 2	14
3.	20 + 5	27
4.	30 + 6	38
5.	40 + 8	50

	What is 2 less than:	Answer
6.	50	48
7.	20 + 3	21
8.	10 + 2	10
9.	30 + 8	36
10.	60 + 5	63

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Learners work in groups

- Guide the whole class while they work in their groups on the following activities.
- Give each group a collection of money cut-outs: 10c, 20c, 50c, R1, R2, R5, R10, R20, R50.
- Ask learners to make different combinations to make up different amounts of money.
- For example:
  How many different ways can you make R2 (R1+R1; 50c + 50c + R1, etc.)
- Remember that learners will sometimes be limited in their answers because of the coin and note cut-outs they received.
- Allow learners to come to the board individually and write up their combination and the total amount made.
- Discuss the combinations.
- After each learners gives a combination, ask the learners if the answer they gave is the only possible way to make up that total.
- Allow other learners from the class to participate in a discussion about different combinations that make up the same total.
- Discuss how various coins and notes can be used.

Activity 2: Whole class activity

- Solve the following problems (make use of the money cut-outs).
- Ask these questions after reading each problem question in order to help the learners analyse and understand the problem:
  - *What is the key word?*
  - *What is the question?*
  - *What are the numbers?*
  - *What must I do to find the answer?*
- Joe bought 5 sweets. Each cost 10c. How much did he spend? Draw a picture to show the answer.
- Zurina's taxi fare is R5,50. She pays with a R10 note. How much change does she get? Draw a picture.
- Thenje pays R5 to travel by taxi to school in the morning. She pays with a R20 note. How much change does she receive? How much money will she have left when she returns home?
  (Answer: first part: R20 – R5 = R15, second part: R15 – R5 = R10.)
- Mia spent R38,00. She had R50,00. How much money does she have left? (R12) Draw a picture.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 16: Money problems

Classwork

In each question below think about the following:

- What is the key word?
- What is the question?
- What are the numbers used in this question?
- Draw a picture to show your answer.

1. Joe spent 30c on sweets that cost 10c each. How many sweets did he buy? (3)

2. Zurina's taxi fare is R7,50. How much change does she get when paying with R10, 00? (R2, 50)

3. Mia spent R26, 00. She had R50,00. How much money does she have left? (R24)

4. Thenje pays R10 to travel to school by taxi in the morning. She pays with a R50 note.
   a) How much change does she receive? (R40)
   b) How much money will she have left when she returns home? (R30)

Homework

1. Mom gave me R12. I buy packets of crisps that are R6 each. How many packets of crisps did I get? (2)

2. I take the bus to town on a Saturday morning. A bus ticket is R6 one way. How much change from R20 will I have when I get home? (R8)

3. My brother spent R15 of his pocket money which was R50. How much does he have left? (R35)

WEEK 5

LESSON 17: COUNTING IN 10s

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 2.2 Number patterns.

Lesson vocabulary: Groups of ten, copy, extend, describe, number sequences, forwards, backwards, multiples.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100.
- Sequences should show counting forwards and backwards in 10s from any multiple of 10.

Concepts:

- Copy, extend and describe simple number sequences to at least 150.
- Sequence should show counting forwards and backwards in 10s from any multiple of 10 between 0 and 150.

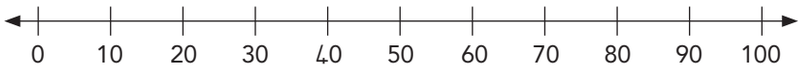
Resources: 0–160 number lines per group (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- N/A

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Show learners a number line labelled in tens.



Ask the leaners to put a circle around intervals of 10 until 100. Discuss the intervals and their meanings, e.g. 10, 20, 30, 40.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count backwards in 5s from 125 to 55.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	4 – 3 =	1
2.	6 – 2 =	4
3.	9 – 1 =	8
4.	4 – 2 =	2
5.	8 – 1 =	7

	Calculate:	Answer
6.	5 – 2 =	3
7.	9 – 8 =	1
8.	8 – 4 =	4
9.	6 – 4 =	2
10.	2 – 0 =	2

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

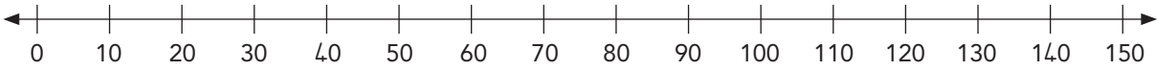
3. Lesson content – concept development (30 minutes)

Activity 1: Learners work in groups

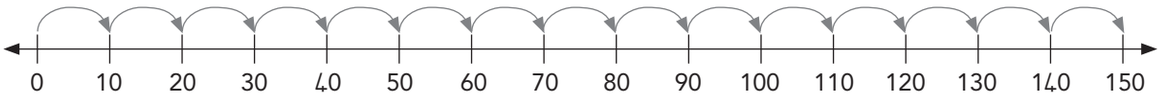
- Give learners a copy of the 1–160 number line (from the *Printable Resources*).
- Group members cut out the number lines and paste them next to one another to form one number line.
- Ask them to count in tens. They have to put their fingers underneath each multiple as they count.
- Circle the multiples of ten on the number line.
- Count forwards and backwards in multiples of ten between 0 and 160, using the number line and pointing to the numbers as they count.

Activity 2: Whole class activity

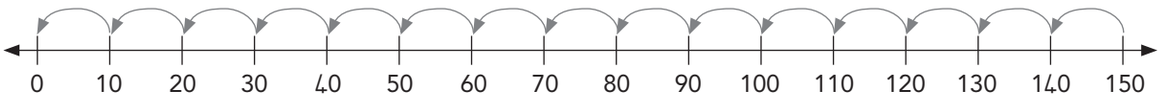
Draw a 0–150 number line on the board before the lesson (labelled in 10s).



- Count with the class in tens, forwards and backwards using the tens number line on the board.
- Draw the jumps while you are counting. 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150.
- Jumps counting forwards:



- Jumps counting backwards:



Activity 3: Whole class activity

Continue working with the 0–150 number line on the board.

- Discuss which numbers will be between 0 and 10, 20 and 30, 50 and 60, 90 and 100, and so on.
- *Where will we find 3 on the number line?* (One learner can come up and point to where 3 would be on the board number line.)
- *Let us count in tens from 3 on the number line.*
- Learners can count using the long number line they made in Activity 1: 13, 23, 33, 43, 53, ..., 143.
- Choose other starting numbers and count in tens pointing to the number line as you do. (E.g. 46, 15, etc.)

4. Classwork activity (25 minutes) (See next page)

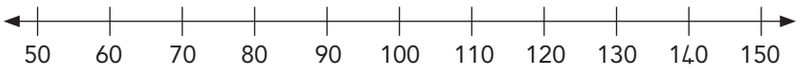
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

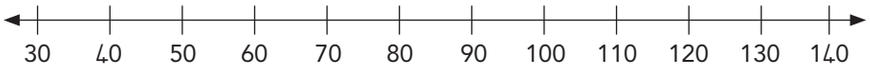
Term 2 Lesson 17: Counting in 10s

Classwork

1. Draw and complete the number line: 50, 60, 70, … , 150.



2. Draw and complete the number line: 33, 43, 53, … , 133.

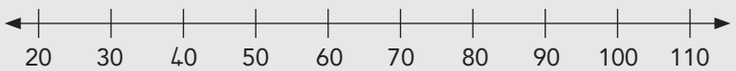


3. Complete the following:
   63 (+ 10) = ____ (73)
   73 (+ 10) = ____ (83)
   83 (+ 10) = ____ (93)
   93 (+ 10) = ____ (103)

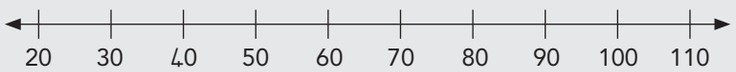
4. Complete the following:
   145 (– 10) = ____ (135)
   135 (– 10) = ____ (125)
   125 (– 10) = ____ (115)
   115 (– 10) = ____ (105)

Homework

1. Draw and complete the number line: 20, 30, 40, ____, 110. (50, 60, 70, 80, 90, 100)



2. Draw and complete the number line: 22, 32, ____, 102. (42, 52, 62, 72, 82,92)



3. Complete the following:
   86 (+ 10) = ____ (96)
   96 (+ 10) = ____ (106)

4. Complete the following:
   141 (– 10) = ____ (131)
   131 (– 10) = ____ (121)

LESSON 18: FIVES UP TO 30 – SHARING

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 1.9 Grouping and sharing leading up to division.

Lesson vocabulary: Equal sharing, grouping, remainders, solve, explain, practical problems.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100.
- Solve word problems in context and explain own solutions to problems involving equal sharing and grouping with whole numbers up to 10 and with answers that may include remainders.

Concepts:

- Copy, extend and describe simple number sequences to at least 150.
- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders.

Resources: Counters, Unifix cubes, scrap paper.

DBE workbook activities relevant to this lesson:

- DBE worksheet 56 (pp. 118 and 119).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give each learner 30 Unifix cubes. Ask them to make groups of five. How many groups did you make? How do we say this? *6 groups of 5 are 30.* (Count this up: – 5, 10, 15, 20, 25, 30). Ask learners to show six rows with five counters. Write down a number sequence: 5, 10, 15, 20, 25, 30. Give each learner 20 Unifix cubes. Ask them to build five towers that are the same height. *How many cubes are there in each tower?* (4) *How many towers are there?* (5) *Are there any cubes left?* (No) Ask the learners why there are cubes left over. Discuss how, if you have 17 Unifix cubes, you can say you will make five towers with three cubes each and two cubes left.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards in 10s from any given multiple between 20 and 150.

1.2 Mental mathematics activity (10 minutes)

	Double:	Answer
1.	1	2
2.	2	4
3.	3	6
4.	4	8
5.	5	10

	Half:	Answer
6.	10	5
7.	8	4
8.	6	3
9.	4	2
10.	2	1

2. Correction/reflection on homework (15 minutes)

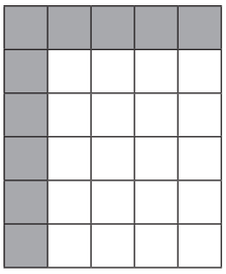
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

Ask three learners to come to the front of the classroom.

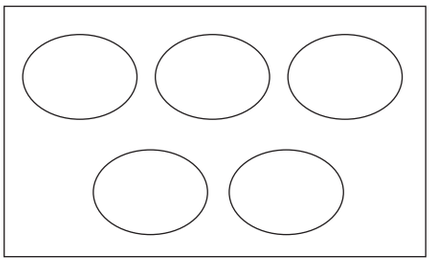
- Ask the first learner to raise their left hand. *How many fingers can you count?* (5) Now raise your right hand. *How many fingers can you count altogether?* (10)
- Repeat with the other two learners, each raising one hand at a time as you count.
- Let us count again, all of the fingers: 5, 10, 15, 20, 25, 30.
- Draw a grid with 6 rows and 5 columns on the board.



- Ask the learners to count the rows. (6) Show how the rows run across from left to right in the grid.
- The top row is coloured.
- Ask the learners to count the columns. (5) Show how the columns run vertically from the top to the bottom of the grid.
- The first column is coloured.
- Count up the 5s in the grid by counting the blocks in each row: 5, 10, 15, 20, 25, 30.
- Write number sentences to express the repeated addition of 5 illustrated in the grid. (5, 5 + 5 =10, 5 + 5 + 5 =15, 5 + 5 + 5 + 5 = 20, 5 + 5 + 5 + 5 + 5 = 25, 5 + 5 + 5 + 5 + 5 + 5 = 30.)

Activity 2: Learners work in groups

- In this activity learners could use their knowledge of the 5s pattern and repeated addition of 5 share in 5s.
- Ask one learner from each group to draw 5 circles on a piece of scrap paper (see the diagram below).



- Give each group 30 counters. Do the following practical activities:
- Ask the learners to share 15 of the counters equally amongst the circles on the scrap paper. *How many counters in each circle?* (3)
- Ask the learners to share 25 of the counters equally amongst the circles. *How many counters in each circle?* (5)
- *What happens if you have to share out 26 counters equally amongst the circles? How many counters in each circle?* (5) *How many counters are left?* (1)
- Repeat with 27, 28, 29 and 30. (When I share 27, 28 or 29 counters, I have left overs, when I share 30 counters, each group gets 6 counters and I do not have a left over.)
- Discuss 30 as a multiple of 5. (30 = 5 + 5 + 5 + 5 + 5 + 5, 6 groups of 5 make 30.)

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 18: Fives up to 30 – sharing

In these activities learners revise counting in 5s. They then are asked to share certain amounts amongst 5 friends/groups/etc. They need to work out how many each friend/group/etc. will get. They could use their knowledge of the 5s pattern and repeated addition of 5s to solve these.

Classwork

1. Three children have five sweets each. How many sweets do they have altogether? (Count in 5s: 3 5s give me 5, 10, 15. They have 15 sweets.)

2. There are 5 sweets in a bag. How many sweet are there in 2 bags? (Count in 5s: 2 5s give me 5, 10. They have 10 sweets.)

3. Write a number sequence. 4 rows with 5 blocks in each. (5, 10, 15, 20) Learners may also draw a rectangle or an array of counters with 4 rows of 5 blocks per row. The drawing is good but the number sequence written using symbols is required for the final answer.

4. Share 22 beads equally amongst five groups. (Each group will get 4 beads.) Do you have any left? (2)

5. 27 suckers shared amongst 5 is: __ . (Each group will get 5 suckers). __ (2) suckers are left.

Homework

1. Eight children have five balls each. How many balls are there altogether? (5, 10, 15, 20, 25, 30, 35, 40)

2. There are 5 apples in a bag. How many apples are there in three bags? (5, 10, 15)

3. Share 19 beads equally amongst 5 friends. (Each friend will get 3 beads.) Do you have any left? (4)

4. 21 suckers shared amongst 5 is: __ (Each group will get 4 suckers.) __ (1) sucker is left.

LESSON 19: GROUPING AND SHARING – TWOS UP TO 30

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 1.9 Grouping and sharing leading up to division.

Lesson vocabulary: Equal sharing, grouping, remainders, solve, explain, calculate, practical problems.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100.
- Solve word problems in context and explain own solutions to problems involving equal sharing and grouping with whole numbers up to 10 and with answers that may include remainders.

Concepts:

- Copy, extend and describe simple number sequences to at least 150.
- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders.

Resources: Counters, Unifix cubes, scrap paper.

DBE workbook activities relevant to this lesson:

- DBE worksheet 54 (pp. 114 and 115).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give each learner 30 Unifix cubes. Ask them to take 12 cubes and make groups of two. *How many groups did you make? How can we say this?* 6 groups of 2 is 12. (Count up 2, 4, 6, 8, 10, 12.) Do this up to 30. Ask learners to draw ten columns with two counters in each. Write down a number sequence: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20. Give each learner 21 Unifix cubes. Ask them to build ten towers that are the same height. *How many cubes are there in each tower?* (2) *How many towers are there?* (10) *Are there any cubes left?* (1) We can say 21 Unifix cubes will make ten towers with two cubes each and one cube left.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 2s, in pairs, from any multiple between 80 and 150.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	4 + 2 =	6
2.	7 + 3 =	10
3.	5 + 3 =	8
4.	0 + 2 =	2
5.	1 + 7 =	8

	Calculate:	Answer
6.	3 + 6 =	9
7.	5 + 1 =	6
8.	9 + 0 =	9
9.	4 + 4 =	8
10.	9 + 1 =	10

2. Correction/reflection on homework (15 minutes)

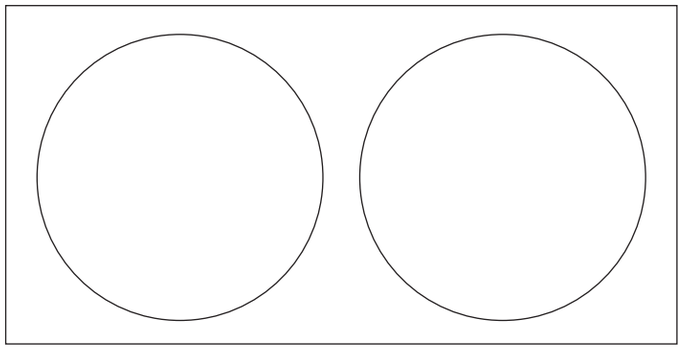
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

In this lesson learners consolidate their understanding of division with and without remainders. The two division strategies, grouping and sharing, are also consolidated. Learners should ultimately be able to think of division using either strategy comfortably. They should be able to read a word problem and choose the appropriate strategy in order to find the solution to the problem. This skill will be developed through lots of practice doing division using both strategies.

Activity 1: Learners work in pairs

- Ask each pair of learners to draw two big circles on a piece of paper (see diagram below).



- Give each pair of learners 30 counters. Do the following practical sharing activities.
- Ask the learners to share 16 counters between the two circles. *How many counters are there in each circle?* (8)
- Now share 25 counters between two circles. *How many counters are there in each circle? (12) How many counters are left?* (1)
- Repeat sharing with other numbers of counters. (E.g. 16 counters, 23 counters.)
- Each time learners have to share the counters between the two circles and see if there were any left over.

Activity 2: Whole class activity

- Learners continue working with the counters from the first activity, but in this activity they will do division by grouping.
- Ask: *I have 30 oranges. I want to pack them into bags with 2 oranges in each bag. How many bags can I make?*
- Learners take 30 counters and put them into groups of 2. They count the number of groups that they made. *How many groups did you make?* (15)
- Ask: *I have 21 sweets. I want to pack them into bags with 2 sweets in each bag. How many bags can I make?*
- Learners take 21 counters and put them into groups of 2. They count the number of groups that they made. *How many groups did you make?* (10 and one sweet left over.)
- Repeat grouping with other numbers of counters. E.g.
- 12 counters divided into 2s gives me 6 groups of 2 and no remainder.
- 29 counters divided into 2s gives me 14 groups of 2 and a remainder of 1.
- Each time learners have to put the counters into groups of two and find out how many groups they made and if there were any left over.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 19: Grouping and sharing – twos up to 30

Classwork

1. Divide 19 beads into groups of 2. How many groups do you make? (2, 4, 6, 8, 10, 12, 14, 16, 18. I make 9 groups.). Do you have any left? (1)

2. 17 suckers shared between 2 friends is ____ (8). ____ (1) sucker is left.

3. Divide 23 beads into groups of 2. How many groups do you make? (2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22. I make 11 groups.). Do you have any left? (1)

4. 27 suckers shared between 2 friends is ____ (13). ____ (1) sucker is left.

5. Divide 29 beads into groups of 2. How many groups do you make? (2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28. I make 14 groups.). Do you have any left? (1)

6. 24 suckers shared between 2 friends is ____ (12). Are there any left? (No, there are none left)

Homework

1. Share 14 beads into groups of 2. How many groups do you make? (2, 4, 6, 8, 10, 12, 14). Do you have any left?

2. 25 suckers shared between 2 friends is ____ (12). ____ (1) sucker is left.

LESSON 20: NUMBER PATTERNS TWOS UP TO 150

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 2.2 Number patterns.

Lesson vocabulary: Number patterns, number sequences, odd numbers, even numbers, multiples, calculate.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100 which should show counting forwards and backwards in 1s.
- Counting forwards and backwards in 10s, 5s and 2s between and up to 100.

Concepts:

- Copy, extend and describe simple number sequences to at least 150 which should show counting forwards and backwards in 2s from any multiple of 2 between 0 and 150.

Resources: 1–160 number line (see *Printable Resources*), counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 44 (pp. 94 and 95).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give the learners 30 counters. Ask them to work in pairs. Ask the learners to group 20 counters in twos. How many groups do they have? (10) Repeat with 12, 14, 16, 18, 20, 22, 24, 26, 28 and 30.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Place learners in groups of 3. Count forwards and backwards in 2s from 0 to 100.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	9 – 2 =	7
2.	7 – 4 =	3
3.	8 – 3 =	5
4.	6 – 1 =	5
5.	3 – 1 =	2

	Calculate:	Answer
6.	4 – 4 =	0
7.	10 – 5 =	5
8.	9 – 4 =	5
9.	7 – 3 =	4
10.	0 – 10 =	10

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

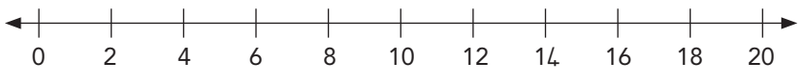
In this lesson learners are reminded about the even and odd numbers. These are two important number patterns that learners should be familiar with. Spend time to make sure that learners are able to distinguish between even and odd numbers and that they know how to recognise them.

Activity 1: Whole class activity

- Learners work in pairs. Learners use the number lines that they used in Lesson 16.
- Ask them to count in 2s. They have to put their fingers underneath each multiple as they count.
- Circle the multiples of two on the number line.
- Ask learners to move their fingers to show while they are counting: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, _ 150.
- Count forwards and backwards in multiples of 2s between 0 and 150, using the number line and pointing to the numbers as they count.
- Discuss: The numbers that you have counted are all multiples of 2. They are called **even numbers**.

Activity 2: Whole class activity

- Draw a 2s number line on the board, labelled from 0 to 20.
- Ask learners to show you which numbers will be between 0 and 8 if you count in twos.



(You will find 2, 4 and 6 between 0 and 8 if you count in twos.)

- Refer to the longer number line (0–160) that each group of learners has on their desks.
- Ask learners which numbers will you find between:
  - 30 and 38 (32, 34, 36)
  - 48 and 58 (50, 52, 54, 56)
  - 72 and 150 (74, 76, 78, 80, 82, 84, 86, 88, __, 148).

Activity 3: Whole class activity

- Refer to the longer number line (0–160) that each group of learners has on their desks.
- Explain to learners that this time you are going to start from a different number. *If you start at 1, and count in 2, where will you land?* (You will land on 3) etc.
- 1, 3, 5, 7, 9, 11, 13, __ (Count this pointing to the numbers on the number line as you count.)
- Explain to the learners that we call these numbers **odd numbers**. They are not multiples of 2.
- Ask the learners to count forward in twos counting from any given number, such as 31, 33, 35, __ etc.

4. Classwork activity (25 minutes) (See next page)

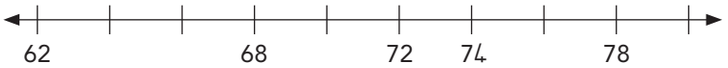
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 20: Number patterns twos up to 150

Classwork

1. Draw and complete the number line counting in 2s from 62 to 80.
   (Learners should complete the labelling as instructed.)



2. Draw and complete the number line counting in 2s from 102 to 120.
   (Learners should complete the labelling as instructed.)

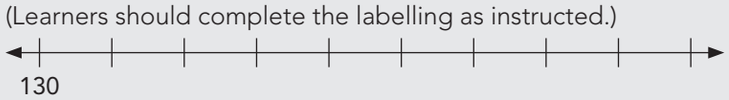
3. Draw a number line and show how you count forwards from 52, 54, 56, … to 68 in 2s. Show the direction of your counting using jumps.
   (Learners should complete the labelling as instructed.)

4. Complete the following:
   52 (+ 2) = ___ (54)
   54 (+ 2) =__ (56)
   56 (+ 2) =__ (58)

5. Complete the following:
   148 (– 2) = ___ (146)
   146 (– 2) = __ (144)
   144 (– 2) = __ (142)

Homework

1. Draw a number line and show how you count forwards from 130, 132, 134, __ to 148 in 2s. Show the direction of your counting using jumps.
   (Learners should complete the labelling as instructed.)



2. Complete the following:
   150 (– 2) = __ (148)
   148 (– 2) = __ (146)

3. Complete the following:
   48 (+ 2) = __ (50)
   50 (+ 2) = __ (52)

WEEK 6

LESSON 21: DIRECTIONS

Teacher's notes
CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.1 Position, orientation and views. **Lesson vocabulary:** Position, on top of, in front of, behind, left, right, next to, down, up, between. **Prior knowledge:** Learners should have been taught how to: • Describe the position of one objects in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to. • Follow directions to move around the classroom and to place one object in relation to another. **Concepts:** • Compare numbers up to 50. • Describe the position of one objects in relation to another, e.g. on top of, in front of, behind, left, right, up, down, next to. • Follow directions to move around the classroom. **Resources:** Directional arrow cards (see *Printable Resources*), objects in the classroom. **DBE workbook activities relevant to this lesson:** • N/A **Assessment**: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Play *Simon says* with your learners. Remember that learners should only move when Simon gives the instruction. Example: Simon says: *Move one step to the left.* Simon says: *Move two steps to the right. Move three steps to the left.* (Note that learners should not move as Simon did not give the last instruction). Simon says: S*tand behind the desk.* Simon says: *Stand in front of the desk.* Simon says: *Stand next to the desk.* Problem solving: Ask the learners if *next* to the desk could be left or right of the desk. **Enrichment**: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 0 to 130.

1.2 Mental mathematics activity (10 minutes)

	Give me a number(s) between:	Answer
1.	45 and 47?	46
2.	48 and 50?	49
3.	1 and 3	2
4.	4 and 6?	5
5.	23 and 26?	24 and 25

	Give me a number(s) between:	Answer
6.	15 and 17	16
7.	46 and 50	47, 48 and 49
8.	22 and 24	23
9.	17 and 19	18
10.	40 and 43	41 and 42

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Ask the learners to stand *next* to their desks or *on* the carpet.
- Show the direction cards to the learners and allow learners demonstrate the meanings.

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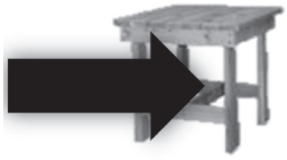
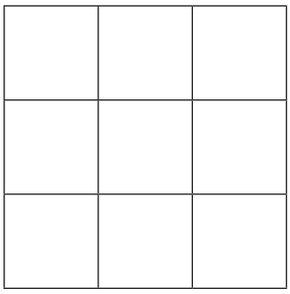
<tr><td>  </td><td>  </td><td>  </td></tr>
<tr><td>  </td><td>  </td><td>Learners say what they did, e.g.
I moved to the right, I moved to the left, I moved to be next to my desk, I moved to the front of my desk, I moved to behind my desk.</td></tr>
</table>

Activity 2: Whole class activity

- Play *Simon says*, i.e. do various movement where learners do the actual movement using words such as:
  - Simon says move to the *left*
  - Simon says move to the *right*
  - Simon says move *next to*
  - Simon says move *in front of*
  - Simon says move *behind*.
- Give individual learners the opportunity to make a sentence using any of the words, with the rest of the class doing the action and repeating the sentence.

Activity 3: Whole class activity

- Draw a grid like this on the board.



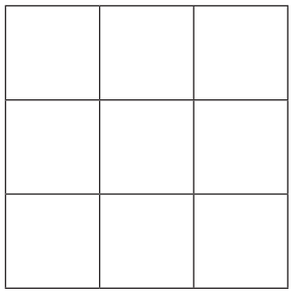
- Ask different learners to come to the board and draw the following shapes in the grid:
  - Draw a circle in the top left block of the grid
  - Draw a square in the bottom right block of the grid
  - Draw a circle in the middle of the grid.
  - Draw a square one block up from your first square.
  - Make up other instructions till the grid is full. Allow learners to make up instructions too, if possible.

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 21: Directions

Classwork

Draw a grid like this in your mathematics book.
(Learners should complete the drawings in the grid as instructed.)



1. Draw a red circle in the middle of the grid.

2. Draw another red circle one block to the left of your circle.

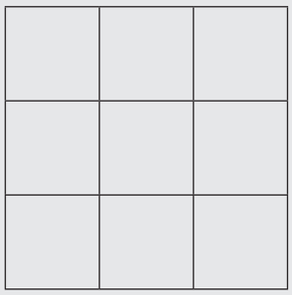
3. Draw a blue square in the bottom right hand corner.

4. Draw a blue square one block up from your first blue square.

5. Draw a yellow triangle in the top left hand corner.

Homework

Draw a square like this to represent your bedroom.
(Answers will vary. Discuss the different layout of the learners' rooms according to their grids.)



1. Draw a carpet in the middle of the grid.

2. Draw a chair in the top left hand corner.

3. Draw a desk one block below the chair.

4. Draw a bed in two blocks – the bottom right hand corner and the bottom centre blocks.

5. Draw a door opening in the top right hand corner.

LESSON 22: POSITION AND ORIENTATION

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.1 Position, orientation and views.

Lesson vocabulary: Position, on top of, in front of, behind, left, right, up, down, next to, directions, more.

Prior knowledge:
Learners should have been taught how to:

- Describe the position of one object in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to.
- Follow directions to move around the classroom and placing one object in relation to another.
- Match different views of the same object.

Concepts:

- Compare numbers up to 50.
- Describe the position of one object in relation to another, e.g. on top of, in front of, behind, left, right, up, down, next to.
- Follow directions to move around the classroom.

Resources: Position word cards (see *Printable Resources*), objects (e.g. small ball, box, books).

DBE workbook activities relevant to this lesson:

- N/A

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Do this as a group activity. Give each group of four learners a ball and a box. Ask the learners to place the ball in the following positions and say it in a sentence: Next to the box, behind the box, in front of the box.

Problem solving: *Can you place the ball on top of the box? Show it. Can you place the box on top of the ball? Show it.*

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 10s from 0–1000.

1.2 Mental mathematics activity (10 minutes)

	Which is more?	Answer
1.	12 or 15?	15
2.	48 or 49?	49
3.	3 or 14?	14
4.	5 or 6?	6
5.	21 or 40?	40

	Which is more?	Answer
6.	31 or 33?	33
7.	14 or 41?	41
8.	7 or 17?	17
9.	0 or 1?	1
10.	5 or 4?	5

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Stick/write the positional words on the board.
- Select learners to demonstrate/enact positional words in front of the class.
- The learners should give you a sentence saying what they have just demonstrated.
  E.g. *Behind*: Jabu is standing behind me. (One learner stands behind you.)
- Demonstrate all of the words: *on top of*, *in front of*, *behind*, *next to*.
- Select learners to demonstrate following directions to move around the classroom.
  E.g. *Left*: Jabu please come and stand on my left.
- Demonstrate all of the words: *left*, *right*, *up*, *down*.
- Give several learners the opportunity to make sentences using these words.

Activity 2: Learners work in groups

- Learners are to use two objects, e.g. a ball and a box. They move objects to demonstrate different positions of objects in relation to each other:
  - *on top of*
  - *in front of*
  - *behind*
  - *left*
  - *right*
  - *up*
  - *down*
  - *next to.*
- Ask learners to give you two sentences for each positional word, and to show you what they mean using objects.
  E.g. *next to*: The ball is *next to* the box. The box is *next to* the ball.
- The class members demonstrate all of the words.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 22: Position and orientation

Classwork

(Answers that are drawn will vary. Go through them and check that they are appropriate.)

1. Draw a picture of a ball behind a box.

2. Draw a picture of a ball next to the box.

3. Draw a picture of a ball in front of the box.

4. Use the drawing on the right to write a sentence using the words:
   a) next to
      (Number 4 ball is next to the box.)
   b) behind
      (Number 8 ball is behind the box.)
   c) on top of
      (Number 13 ball is on top of the box.)

5. Draw a picture of a child standing next to a tree.

Homework

(Answers will vary. Go through them and check that they are appropriate.)

1. Draw a picture of a spoon behind a bowl.

2. Draw a picture of a spoon next to a bowl.

3. Draw a picture of a child standing on top of a chair.

LESSON 23: THREES – MULTIPLICATION

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.8, 1.14 Repeated addition leading to multiplication, 1.16 Mental mathematics.

Lesson vocabulary: Multiplication, symbols, multiply, multiples, double, half, grid.

Prior knowledge:
Learners should have been taught how to:

- Solve word problems in context and explains own solutions to problems involving repeated addition with answers up to 20, using the appropriate symbols +, =, □
- Do repeated addition to 20.

Concepts:

- Solve word problems in context and explains own solutions to problems involving multiplication with answers up to 30, using the appropriate symbols +, x, =, □
- Multiply numbers 1 to 10 by 2 and 5.

Resources: 1–150 number boards (see *Printable Resources*), counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 50 (pp. 106 and 107).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Do the following problem with your learners. Stella sells apples. She has 30. She puts them in bags of 3 apples each. *How many bags with 3 apples per bag can she make?* Ask the learners to show it with counters and draw the bags on a piece of paper. Learners start with the first bag. Fill it with 3 counters. Learners draw and fill another bag. Learners then count 3, 6… They carry on filling bags until they reach 10 bags. They count: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 3s from 0 to 66.

1.2 Mental mathematics activity (10 minutes)

	Double:	Answer
1.	2	4
2.	3	6
3.	1	2
4.	5	10
5.	4	8

	Half:	Answer
6.	4	2
7.	2	1
8.	8	4
9.	10	5
10.	6	3

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

In this lesson learners must use the word 'multiple'. This is an important mathematical term. Make sure that learners know what it means and practise using it.

Activity 1: Learners work in pairs

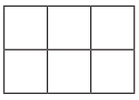
- Give each pair of learners a 1–150 number board and some counters.
- Ask the learners to count in 3s from 3 to 150 by placing counters on the numbers as they count.
- Do not spend too long on this activity. The next activity is the main teaching activity for this lesson. Count quickly and move on.
- During the next lesson you will do the same activity but start from any given number.

Activity 2: Whole class activity

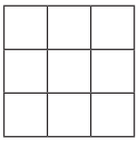
- In this activity you will draw an array, row by row, building it up in threes. Keep on adding another row of 3 squares until you get up to 15 (or more – you decide how big you want to make the array). While you do this, explain how the array is growing and ask the learners questions to engage them in the counting activity.
- Draw a grid of 1 row with 3 blocks in the line on the chalkboard.
- Point to the grid on the board and ask: *How many squares do you see?* (We have a row with three squares. We see 3 squares.)


First row of 3 squares

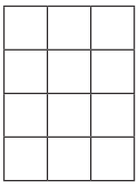
- Add another row of three squares to your array and ask: *How many squares do you see?* (We have two rows with three squares in each row, which will give us 6 squares.)
- Ask: *How do we count this?* (We count 3, 6.)


Next row of 3 squares – count 3, 6

- Add another row of three squares to your array and ask: *How many squares do you see? How do you count this?* (We have three rows with three squares each, which will give us 9 squares – we count 3, 6, 9.)


Next row of 3 squares – count 3, 6, 9

- Add another row of three squares to your array and ask: *How many squares do you see? How do you count this?* (We have four rows with three squares each, which will give us 12 squares – we count 3, 6, 9, 12.)


Next row of 3 squares – count 3, 6, 9, 12

- Etc.
- Discuss these as multiples of 3.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 23: Threes – multiplication

This activity involves a lot of work drawing arrays. You might want to select a few of the questions for the learners to do rather than to ask them to do all of the questions as this might take too long.

In Question 5 learners are asked to use counting in 3s to solve a grouping division problem. Explain this problem solution to the class so that they can see how they count up the number of threes in 24 to find the answer to the question.

Classwork

(The drawings are not shown here. Draw a few on the board if you wish to when you go over this homework with your class.)

For the first four questions draw grids and write number sequences to count the blocks:

1. 4 rows with 3 blocks in a row. (3, 6, 9, 12)

2. 6 rows with 3 blocks in a row. (3, 6, 9, 12, 15, 18)

3. 8 rows with 3 blocks in a row. (3, 6, 9, 12, 15, 18, 21, 24)

4. 5 rows with 3 blocks in a row. (3, 6, 9, 12, 15)

5. Stella sells apples in bags of 3 apples each. She has 24 apples. How many bags of 3 apples each can she make? Draw a picture and write a number sequence. (3, 6, 9, 12, 15, 18, 21, 24. She can make 8 bags with three apples in each.)

Homework

1. Draw 3 rows of 3 blocks each and write a number sequence. (3, 6, 9)

2. Draw 7 rows of 3 blocks each and write a number sequence. (3, 6, 9, 12, 15, 18, 21)

3. Draw 10 rows of 3 blocks each and write a number sequence. (3, 6, 9, 12, 15, 18, 21, 24, 27, 30)

LESSON 24: NUMBER PATTERNS – THREES

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 2.2 Number patterns.

Lesson vocabulary: Number patterns, number sequences, multiples, calculate.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100 which should show counting forwards and backwards in 1s.
- Count forwards and backwards in 10s, 5s and 2s between and up to 100.

Concepts:

- Copy, extend and describe simple number sequences to at least 150 which should show counting forwards and backwards in 3s from any multiple of 3 between 0 and 150.
- Create own patterns.

Resources: 1–150 number boards (see *Printable Resources*), counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 51 (pp. 108 and 109).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give the learners 30 counters. Ask them to make a row of 3 counters and count (3). Add a row of 3 counters and then count (3, 6). Continue adding rows of 3 until you get to 30. Count after each row you add.

Problem solving: *I have 3 more marbles than my brother. He has 9 marbles. How many marbles do I have?* (12) Show it with counters.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 3s from 66 to 99.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	3 + 6 =	9
2.	5 – 2 =	3
3.	4 + 3 =	7
4.	7 – 3 =	4
5.	8 + 1 =	9

	Calculate:	Answer
6.	5 + 4 =	9
7.	6 – 1 =	5
8.	7 + 2 =	9
9.	3 – 0 =	3
10.	0 + 10 =	10

2. Correction/reflection on homework (15 minutes)

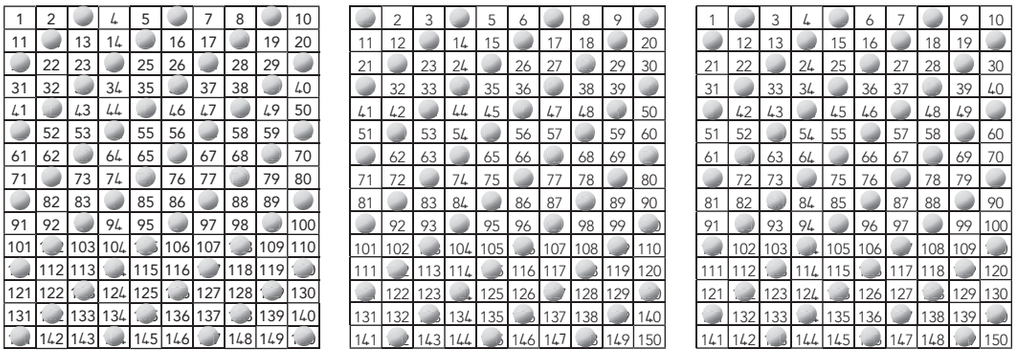
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Note that in this lesson you should try not to spend too much time on Activity 1. Use it quickly, to look for patterns using boards – use counters to show the patterns so they are visually evident. Have the boards and the counters ready so that you do not waste time. Activity 2 should take more time and is the main part of the lesson.

Activity 1: Learners work in groups

- Give each group of learners a 1–150 number board and some counters.
- Ask the learners to:
  - Place counters on the multiples of 3 starting from 3 (3, 6, 9, 12, __ 150).
  - Place counters on the sequence made by adding 3 starting from 1 (1, 4, 7, 10, __ 148).
  - Place counters on the sequence made by adding 3 starting from 2 (2, 5, 8, 11, __ 149).
- Discuss the patterns you have made and counted. (The first board shows the multiples of 3, the other boards show sequences of numbers created by adding 3s.)
- Ask: *What do you notice about the pattern made by the counters on the 1–150 number board?* (The counters on the board make diagonal lines. There are 2 empty squares between each counter every time. Etc.)



- Discuss these patterns made by adding 3s. *(If I start from a multiple of 3, I count on in threes. If I start from a number that is not a multiple of 3, the gap between each of my counts is 3 but I do not land on a multiple of 3.)*

Activity 2: Learners work in groups

- Ask the learners to take off all of the counters from your number board and then continue with this activity.
- Place counters on the multiples of 3 starting from 21 to 30.
- *How many multiples of 3 are there between 21 and 30?* (4)
- Place counters on the multiples of 3 starting from 31 to 40.
- *How many multiples of 3 are there between 21 and 40?* (7)
- *What do you notice about the number of multiples of 3 in each row?* (There are 3 in one row and 4 in the next row. They are now always the same number in each row. Etc.)
- Place counters on the multiples of 3 starting from 21 to 80.
- *How many multiples of 3 are there between 21 and 80?* (20)
- Place counters on the sequence made by adding 3 starting from 72 to 129.
- *How many numbers in the sequence are there between 72 and 129?* (20)
- *How many rows do you need to count up 10 multiples of 3?* (3 because there are 10 3s in 30. Each 3 rows have 30 numbers recorded in them.)
- Discuss the difference between multiples of 3 and counting on in 3s. (Multiples of 3 are divisible by 3. When you count on in 3s, if you start on a multiple of 3, you find multiples of 3. For example: 30, 33, 36, 39, 42, 45, … But if you start at another number, that is not a multiple of 3, you make a sequence where the gap between all of the terms in the sequence is three but the numbers are not multiples of 3. For example: 37, 40, 43, 46, 49, 51, 54, 57, …)

4. Classwork activity (25 minutes) (See next page)
5. Homework activity (5 minutes) (See next page)
6. Reflection on lesson

Term 2 Lesson 24: Number patterns – threes

Classwork

1. Use a 1–150 number board. Colour all of the multiples of 3 in red.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150

2. Extend 3, 6, 9, ..., 33. (12, 15, 18, 21, 24, 27, 30, 33)
3. Extend 27, 30, 33, ..., 57. (36, 39, 42, 45, 48, 51, 54, 57)
4. Extend 130, 133, 136, ..., 154. (139, 142, 145, 148, 151, 154)
5. Draw circles to make a worm. Count in 3s starting from 66 to 39. Write your numbers inside the circles that make up the worm's body. (66, 63, 60, 57, 54, 51, 48, 45, 42, 39)

Homework

1. Extend 12, 15, 18, ..., 36. (21, 24, 27, 30, 33)
2. Extend 45, 48, 51, ..., 72. (54, 57, 60, 63, 66, 69)
3. Extend 45, 42, 39, ..., 12. (36, 33, 30, 27, 24, 21, 18, 15)
4. Extend 129, 126, 123, ..., 99. (120, 117, 114, 111, 108, 105, 102)

WEEK 7

LESSON 25: FOURS – MULTIPLICATION

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.8, 1.14 Repeated addition leading to multiplication, 1.16 Mental mathematics.

Lesson vocabulary: Multiplication, symbols, multiply, calculate.

Prior knowledge:
Learners should have been taught how to:

- Solve word problems in context and explains own solutions to problems involving repeated addition with answers up to 20, using the appropriate symbols +, =, ☐
- Repeated addition to 20.

Concepts:

- Solve word problems in context and explains own solutions to problems involving multiplication with answers up to 30, using appropriate symbols +,x, =, ☐
- Multiply numbers 1 to 10 by 2 and 5.

Resources: 1–150 number boards (see *Printable Resources*), counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 52 (pp. 110 and 111).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Do the following problems with your learners. Sipho sells bananas. He has 40 bananas. He puts them in bags of 4 bananas each. *How many bags with 4 bananas per bag can he make?* Ask the learners to show it with counters and draw the bags on a piece of paper. Learners start with the first bag. Fill it with 4 counters. Learners draw and fill another bag. Learners then count 4, 8… They carry on filling bags until they reach 10 bags. They count: 4, 8, 12, 16, 20, 24, 28, 32, 36, 40.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 4s from 0 to 48.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	7 + __ = 9	2
2.	4 + __ = 10	6
3.	2 + __ = 8	6
4.	1 + __ = 10	9
5.	4 + __ = 8	4

	Calculate:	Answer
6.	0 + __ = 7	7
7.	8 + __ = 10	2
8.	9 + __ = 10	1
9.	3 + __ = 5	2
10.	5 + __ = 10	5

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

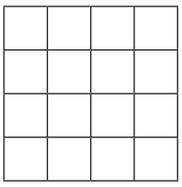
Activity 1: Whole class activity

- Give each group of learners a 1–150 number board and some counters.
- Ask the learners to count in 4s from 4 to 150 by placing counters on the numbers as they count.
- Do not spend too long on this activity. The next activity is the main teaching activity for this lesson. Count quickly and move on.
- During the next lesson we will do the same activity but start from any given number.

Activity 2: Whole class activity

- In this activity you again work with arrays. The arrays in this lesson have rows of 4 because you are working with patterns of four. You will build up an array by adding rows of 4 squares until you get up to 20 (or more – you decide how big you want to make the array). While you do this, explain how the array is growing and ask the learners questions to engage them in the counting activity:
  - Draw a grid of 1 line with 4 blocks in the line on the chalkboard.

    
  - Add another row of four squares to your array and ask: *How many squares do you see?* (We have two rows with four squares in each row, which will give us 8 squares.)
  - Ask: *How do we count this?* (We count 4, 8)
- Keep on adding another row of 4 squares until you get up to 20 (or higher depending on how big you want to make the array).
- As you add rows, you ask: *How many squares do you see? How do you count this?* (We have three rows with four squares each, which will give us 12 squares – we count 4, 8, 12.)
- Etc.



First row of 4 squares

Next row of 4 squares – count 4, 8

Next row of 4 squares – count 4, 8, 12

Next row of 4 squares – count 4, 8, 12, 16

- Discuss these as multiples of 4.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 25: Fours – multiplication

This activity involves a lot of work drawing arrays. You might want to select a few of the questions for the learners to do rather than to ask them to do all of the questions as this might take too long.

In Question 5 learners are asked to use counting in 4s to solve a grouping division problem. Explain this problem solution to the class so that they can see how they count up the number of fours in 32 to find the answer to the question.

Classwork

(The drawings are not shown here. Draw a few on the board if you wish to when you go over this homework with your class.)

For the first four questions draw grids and write number sequences to count the blocks:

1. 4 rows with 4 blocks in a row. (4, 8, 12, 16)

2. 6 rows with 4 blocks in a row. (4, 8, 12, 16, 20, 24)

3. 8 rows with 4 blocks in a row. (4, 8, 12, 16, 20, 24, 28, 32)

4. 5 rows with 4 blocks in a row. (4, 8, 12, 16, 20)

5. Stella has 32 apples. She sells apples in bags of 4 apples each. How many bags of 4 apples each can she make? Draw a picture and write a number sequence. (4, 8, 12, 16, 20, 24, 28, 32. Stella can make 8 bags with four apples in each bag.)

Homework

1. Draw 3 rows of 4 blocks each and write a number sequence. (4, 8, 12)

2. Draw 7 rows of 4 blocks each and write a number sequence. (4, 8, 12, 16, 20, 24, 28)

3. Draw 10 rows of 4 blocks each and write a number sequence. (4, 8, 12, 16, 20, 24, 28, 32, 36, 40)

LESSON 26: NUMBER PATTERNS – FOURS

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 2.2 Number patterns.

Lesson vocabulary: Number patterns, number sequences, multiples, calculate.

Prior knowledge:
Learners should have been taught how to:

- Copy, extend and describe simple number sequences to at least 100 which should show counting forwards and backwards in 1s.
- Count forwards and backwards in 10s, 5s and 2s between and up to 100.

Concepts:

- Copy, extend and describe simple number sequences to at least 150 which should show counting forwards and backwards in 4s from any multiple of 4 between 0 and 150.
- Create own number patterns.

Resources: 1–150 number boards (see *Printable Resources*), counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 53 (pp. 112 and 113).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give the learners counters. Ask them to make a row of 4 counters (4). Add a row of four every time and count (4, 8). Continue adding rows of 4 until you get to 32. Discuss these as multiples of 4.

Problem solving: *I have 4 times more marbles than my brother. He has 9 marbles. How many marbles do I have?* (36). Show it using counters.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 4s from 36 to 148.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	7 – __ = 2	5
2.	4 – __ = 3	1
3.	10 – __ = 8	2
4.	9 – __ = 4	5
5.	8 – __ = 5	3

	Calculate:	Answer
6.	9 – __ = 2	7
7.	2 – __ = 1	1
8.	3 – __ = 1	2
9.	5 – __ = 0	5
10.	6 – __ = 6	0

2. Correction/reflection on homework (15 minutes)

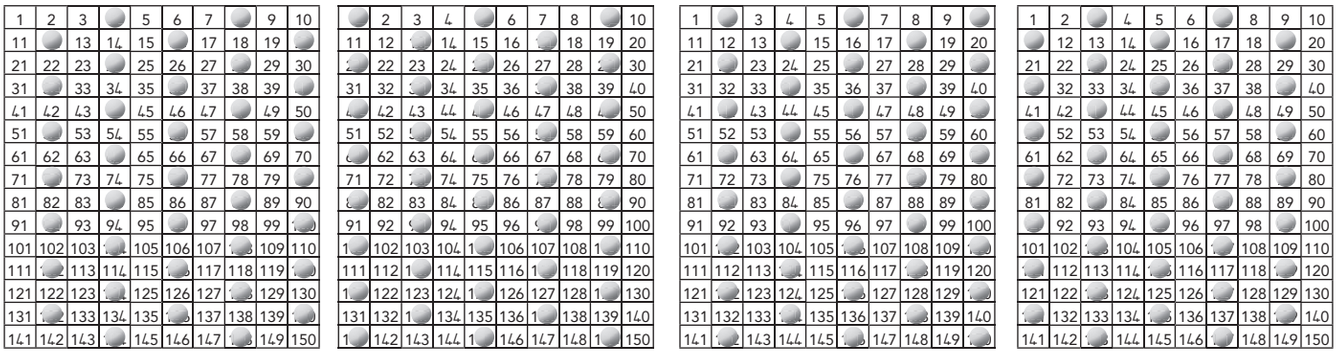
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Again, please note that in this lesson you should try not to spend too much time on Activity 1. Use it quickly, to look for patterns using boards – use counters to show the patterns so they are visually evident. Have the boards and the counters ready so that you do not waste time. Activity 2 should take more time and is the main part of the lesson.

Activity 1: Learners work in groups

- Give each group of learners a 1–150 number board and some counters.
- Place counters on the multiples of 4 starting from 4 (4, 8, 12, 16, ... 148).
- Place counters on the sequence made by adding 4 starting from 1 (1, 5, 9, 13, ..., 149).
- Place counters on the sequence made by adding 4 starting from 2 (2, 6, 10, 14, ..., 150).
- Place counters on the sequence made by adding 4 starting from 3 (3, 7, 11, 15, ..., 147).
- Discuss these as multiples of 4. (The first board shows the multiples of 4, the other boards show sequences of numbers created by adding 4s.)



- Discuss these patterns made by adding 4s. (e.g. Discuss the way the counters land in different positions and make patterns in rows and columns in a similar way, but changing according to where you start the counting.)

Activity 2: Learners work in groups

- Learners should use the 1–150 number board to look for the sequences they work with in this activity.
- *How many multiples of 4 are there between 1 and 40?* (10)
- *How many multiples of 4 are there between 40 and 80?* (10)
- *How many multiples of 4 are there between 80 and 120?* (10)
- *How many rows do you need to count up 10 multiples of 4?* (4. Because there are 10 4s in 40. Each 4 rows have 40 numbers recorded in them.)
- *How many multiples of 4 are there between 31 and 80?* (13)
- Place counters on the sequence made by adding 4 starting from 3 to 39.
- *How many numbers in the sequence made by adding four each time are there between 3 and 39?* (10)
- Place counters on the sequence made by adding 4 starting from 69 to 117.
- *How many numbers in the sequence made by adding four each time are there between 69 and 117?* (13)
- Place counters on the sequence made by adding 4 starting from 122 to 150.
- *How many numbers in the sequence made by adding four each time are there between 122 and 150?* (8)
- Discuss the difference between multiples of 4 and counting on in 4s. (Multiples of 4 are divisible by 4. When you count on in 4s, if you start on a multiple of 4, you find multiples of 4. For example: 40, 44, 48, 52, 56, 60, … But if you start at another number, that is not a multiple of 4, you make a sequence where the gap between all of the terms in the sequence is four but the numbers are not multiples of 4. For example: 43, 47, 51, 55, 59, 63, …)

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 26: Number patterns – fours

Classwork

1. Use a 1–150 number board. Colour all of the multiples of 4 in blue.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150

2. Extend 4, 8, 12, 16, ..., 48. (20, 24, 28, 32, 36, 40, 44)
3. Extend 52, 56, 60, ..., 88. (64, 68, 72, 76, 80, 82, 84)
4. Extend 112, 116, 120, ..., 148. (124, 128, 132, 136, 140, 144)
5. Draw 8 circles to make a worm. Count in 4s starting at 92 to 120. Write the numbers inside the circles that make up the worm's body. (92, 96, 100, 104, 108, 112, 116, 120)

Homework

1. Extend:
   a) 16, 20, ..., 40. (24, 28, 32, 36, 40)
   b) 60, 64, ..., 88. (68, 72, 76, 80, 82, 84)
   c) 144, 140, ..., 124. (136, 132, 128)

2. Draw 9 circles to make a worm. Count in 4s starting at 60 to 92. Write the numbers inside the circles that make up the worm's body. (60, 64, 68, 72, 76, 80, 84, 88, 92)

LESSON 27: MULTIPLICATION AND DIVISION AS INVERSE OPERATIONS

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.9 Grouping and sharing leading to division, 1.16 Mental mathematics.

Lesson vocabulary: Multiplication, division, divide, times, multiply, equal sharing, grouping.

Prior knowledge:
Learners should have been taught how to:

- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 20 with answers that can include remainders.

Concepts:

- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders.

Resources: Counters, 2s multiplication hand-out (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- DBE worksheet 58 (pp. 124 and 125).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Do one example of the following: grouping, multiplication, sharing and division. Show me 4 groups of 2. *How do we say it?* (4 groups of 2 is 8) *How do we write it as a multiplication number sentence?* (4 times 2 is 8) *How do we write it as a multiplication?* (4 x 2 = 8) *How do we share 8 amongst 2?* Ask learners to draw it. *How do we write it as a division?* (8 divided by 2 = 4)

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 4s from 0 to 100 clapping on the multiples of 4.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	4 + __ = 9	5
2.	6 – __ = 4	2
3.	2 + __ = 10	8
4.	3 – __ = 2	1
5.	9 + __ = 10	1

	Calculate:	Answer
6.	10 – __ = 7	3
7.	1 + __ = 8	7
8.	5 – __ = 5	0
9.	7 + __ = 9	2
10.	8 – __ = 6	2

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

In this lesson you introduce the multiplication and division symbols. The symbols used in mathematics make it simpler and more efficient to write number sentences that express what operation has been done. Learners must understand the meaning of the operations properly and they must also know how to record the numerical working involved in doing the operations.

You should also make sure that you use (and allow the learners to use) all of the mathematical vocabulary included in this lesson. Refer to the dictionary if necessary to help you with the explanations of some of the vocabulary words.

Activity 1: Learners work in groups

- Give each group of learners 20 counters.
- Ask the learners: *What does **group** mean?* (Put items together according to a guiding rule.) *What other word can I use for **group**?* ('lot'. E.g. I can say one lot of 5, or several lots of 5.)
- *If I have 4 groups of 2, how can I say it as a multiplication number sentence?* (4 times 2 or 4 multiplied by 2 is 8)
- Allow the learners to show this grouping using the counters.
- *How can we write it as a multiplication number sentence?* ($4 \times 2 = 8$)
- Write the multiplication number sentence on the board.
- Repeat with other examples, checking each time that learners can demonstrate the operation using the counters.
- Write each number sentence on the board once they have shown the concrete demonstration.
  - 3 groups of 2
  - 5 groups of 2
  - 10 groups of 2
  - Etc.
- *What does **share** mean?* (divide – put into smaller groups.) *If I share 8 counters between 2 children, what do I get?* (If I share the counters equally, each child will get 4 counters.)
- Allow the learners to show this sharing using the counters.
- *How can I say it as a division number sentence?* (8 divided by 2 is 4 which we write symbolically as $8 \div 2 = 4$.) Write the division number sentence on the board.
- Repeat with other examples, checking each time that learners can demonstrate the operation using the counters.
- Write each number sentence on the board once they have shown the concrete demonstration:
  - 10 divided by 2 is 5 (symbolically we write this as $10 \div 2 = 5$.)
  - 4 divided by 2 is 2 (symbolically we write this as $4 \div 2 = 2$.)
  - Etc.

Activity 2: Learners work in groups

Give each group of learners the 2s multiplication and division hand-out (see *Printable Resources*).

- Refer to the table and ask the learners to discuss the paired relationships shown on the table.
- Encourage discussion making use of vocabulary words such as *multiply*, *share*, *times*, *divide*, *grouping*, *equal sharing*.
- *If I say 9 times 2 is 18, what is the related division number sentence?* (18 divided by 2 is 9)
- *If I say 5 times 2 is 10, what is the related division number sentence?* (10 divided by 2 is 5)
- *If I say 3 times 2 is 6, what is the related division number sentence?* (6 divided by 2 is 3)
- The pairs of operations that learners should become aware of through the study of the table are the *inverses*. You do not teach them the term *inverse*, but you need to be sure that they realise that multiplication and division are related and that they have opposite effects – the one undoes what the other one does.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 27: Multiplication and division as inverse operations

In this activity the symbols for multiplication and division are used. Learners need to become comfortable using correct mathematical symbols to record the calculations they do.

Classwork

1. One child has 2 legs. How many legs do 5 children have? (10)

2. Each child has a R2 coin. There are 3 children. How much money is there altogether? (R6)

3. 6 groups of 2 is __ ? (12)

4. 9 groups of 5 is __ ? (45)

5. 3 × 2 = __ (6) and 6 ÷ 2 = __ (3)

6. 8 × 2 = __ (16) and 16 ÷ 2 = __ (8)

7. 5 × 2 = __ (10) and 10 ÷ 2 = __ (5)

8. 10 × 2 = __ (20) and 20 ÷ 2 = (10)

Homework

1. 2 × 2 = __ (4) and 4 ÷ 2 = __ (2)

2. 7 × 2 = __ (14) and 14 ÷ 2 = __ (7)

3. 9 × 2 = __ (18) and 18 ÷ 2 = __ (9)

4. 10 × 2 = __ (20) and 20 ÷ 2 = __ (10)

LESSON 28: MULTIPLICATION AND DIVISION AS INVERSE OPERATIONS

Teacher's notes
CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.9 Grouping and sharing leading to division, 1.16 Mental mathematics. **Lesson vocabulary:** Multiplication, multiply, times, division, divide, equal sharing, grouping, remainders. **Prior knowledge:** Learners should have been taught how to: • Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders. **Concepts:** • Solve and explain solutions to practical problems that involve equal sharing and grouping up to 50 with answers that can include remainders. **Resources:** Counters, 5s multiplication hand-out (see *Printable Resources*). **DBE workbook activities relevant to this lesson:** • DBE worksheet 59 (pp. 126 and 127). **Assessment**: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Do one example of the following: grouping, multiplication, sharing and division. Show me 4 groups of 5. *How do we say it?* (4 groups of 5 is 20). *How do we write it as a multiplication number sentence?* (4 times 5 is 20). *How do we write it as a multiplication sum?* (4 x 5 = 20) *How do we share 20 between 5?* Ask learners to draw it. *How do we write it as a division sum?* (20 divided by 5 = 4). **Enrichment**: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 80 and count forwards to 120 in 2s.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	14 + __ = 25	11
2.	16 – __ = 4	12
3.	12 + __ = 20	8
4.	13 – __ = 2	11
5.	19 + __ = 28	9

	Calculate:	Answer
6.	20 – __ = 7	13
7.	14 – __ = 7	7
8.	15 – __ = 5	10
9.	17 + __ = 29	12
10.	18 – __ = 6	12

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

This lesson allows for consolidation of the operations of multiplication and division and the relationship between these operations.

Activity 1: Learners work in groups

- Give each group of learners approximately 30 counters.
- Ask the learners: *What does group mean?* (Put items together according to a guiding rule.) *What other word can I use for group?* ('lot'. E.g. I can say one lot of 5, or several lots of 5.)
- *If I have 3 groups of 5, how can I say it as a multiplication number sentence?* (5 times 3 or 5 multiplied by 3 is 15.)
- Allow the learners to show this grouping using the counters.
- *How can we write it as a multiplication number sentence?* (5 × 3 = 15)
- Write the multiplication number sentence on the board.
- Repeat with other examples, checking each time that learners can demonstrate the operation using the counters.
- Write each number sentence on the board once they have shown the concrete demonstration:
  - 3 groups of 5
  - 5 groups of 5
  - 6 groups of 5
  - Etc.
- *What does share mean?* (divide – put into smaller groups.)
- *If I share 15 counters between 3 children, what do I get?* (If I share the counters equally, each child will get 5 counters.)
- Allow the learners to show this sharing using the counters.
- *How can I say it as a division number sentence?* (15 divided by 3 is 5.) Write the division number sentence on the board. (We write this symbolically as 15 ÷ 3 = 5.)
- Repeat with other examples, checking each time that learners can demonstrate the operation using the counters.
- Write each number sentence on the board once they have shown the concrete demonstration:
  - 10 divided by 5 is 2 (We write this symbolically as 10 ÷ 5 = 2.)
  - 40 divided by 5 is 8 (We write this symbolically as 40 ÷ 5 = 8.)
  - Etc.

Activity 2: Learners work in groups

Give each group of learners the 5s multiplication and division hand-out. (see *Printable Resources*.)

- Refer to the table and ask the learners to discuss the paired relationships shown on the table.
- Encourage discussion making use of vocabulary words such as *multiply*, *share*, *times*, *divide*, *grouping*, *equal sharing*.
- *If I say 9 times 5 is 45, what is the related division number sentence?* (45 divided by 5 is 9)
- *If I say 5 times 5 is 25, what is the related division number sentence?* (25 divided by 5 is 5)
- *If I say 3 times 5 is 15, what is the related division number sentence?* (15 divided by 5 is 3)
- The pairs of operations that learners should become aware of through the study of the table are the *inverses*. You do not teach them the term *inverse*, but you need to be sure that they realise that multiplication and division are related and that they have opposite effects – the one undoes what the other one does.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 28: Multiplication and division as inverse operations

Classwork

1. One child has 2 arms. How many arms do 5 children have? (10)
2. One child has a R5 coin. There are 3 children. How much money is there altogether? (R15)
3. 6 groups of 5 is __ ? (30)
4. 9 groups of 5 is __ ? (45)
5. 3 × 5 = __ (15) and 15 ÷ 5 = __ (3)
6. 8 × 5 = __ (40) and 40 ÷ 5 = __ (8)
7. 5 × 5 = __ (25) and 25 ÷ 5 = __ (5)
8. 10 × 5 = __ (50) and 50 ÷ 5 = __ (10)

Homework

1. 2 × 5 = __ (10) and 10 ÷ 5 = __ (1)
2. 4 × 5 = __ (20) and 20 ÷ 5 = __ (4)
3. 7 × 5 = __ (35) and 35 ÷ 5 = __ (7)
4. 10 × 5 = __ (50) and 50 ÷ 5 = __ (10)

WEEK 8

LESSON 29: 2-D SHAPES

Teacher's notes
CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.3 2-D shapes.
Lesson vocabulary: 2-D shapes, circles, triangles, squares, rectangles, size, colour, shapes, straight sides, round (curved) sides, recognise, sort, compare, record.
Prior knowledge: Learners should have been taught how to: • Recognise and name 2-D shapes: circles, triangles and squares. • Describe, sort and compare 2-D shapes in terms of: size, colour, straight sides and round sides.
Concepts: • Recognise and name 2-D shapes – circles, triangles, squares and rectangles. • Describe, sort and compare 2-D shapes in terms of: size, colour, shape, straight sides and round sides.
Resources: Mixed shapes (see *Printable Resources*), shape cut-outs (see *Printable Resources*).
DBE workbook activities relevant to this lesson: • DBE worksheet 36 (pp. 74 and 75).
Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Give the learners plastic shapes (or cut-out shapes that you have made). Ask them to place one of each of the following shapes on their desks: triangles, rectangles, squares and circles. Now place another shape that is the same as the first one next to it, but in a different position. Problem solving: Each time ask them if all the shapes in each line are the same kind of shapes.
Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 4, count on in fours to 40.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	18 – __ = 4	14
2.	20 – __ = 2	18
3.	17 – __ = 6	11
4.	16 – __ = 6	10
5.	13 – __ = 1	12

	Calculate:	Answer
6.	9 – __ = 3	6
7.	15 – __ = 5	10
8.	14 – __ = 2	12
9.	20 – __ = 3	17
10.	13 – __ = 3	10

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

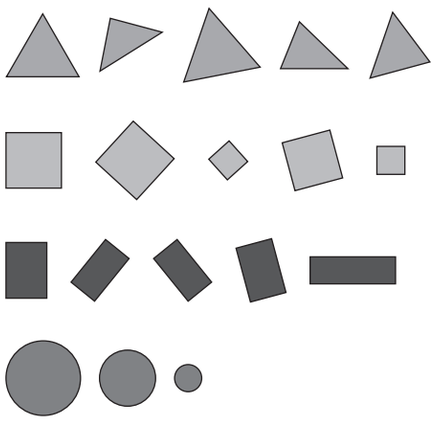
3. Lesson content – concept development (30 minutes)

In this lesson you revise the names of 2-D shapes. Allow learners to say the names of the shapes and to talk about their characteristics when they talk to you about the drawings that you have done of shapes on the board.

Learners often don't recognise shapes if they are not drawn in a familiar orientation. In this lesson you should encourage them to draw shapes on many different orientations and allow them to identify shapes that have been drawn in different positions and at different angles.

Activity 1: Learners work in groups

- Do this activity practically with the learners.
- Give the learners plastic/cardboard shapes (shape cut outs) of different sizes.
- Ask the learners to sort the shapes according to shape, size and colour.
- Discuss the various sortings that the learners have done. Talk about different groups that are formed when you sort according to different criteria.
- Draw these pictures on the board and give learners a copy of the *mixed shapes* printable.
- Learners should use the shape cut-outs to make a similar display using the shape cut-outs.



- Discuss the following, referring to the mixed shapes printable:
  - Triangles that are shaped differently and placed in different positions.
  - Squares of different sizes, placed in different positions.
  - Rectangles of different shapes, placed in different positions.
  - Circles of different sizes.
  - The position and orientation of the shapes.

4. Classwork activity (25 minutes) (See next page)

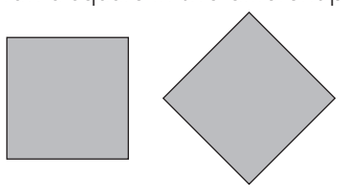
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

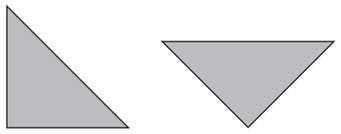
Term 2 Lesson 29: 2-D shapes

Classwork

1. Draw a square in two different positions.

()

2. Draw a triangle in two different positions.

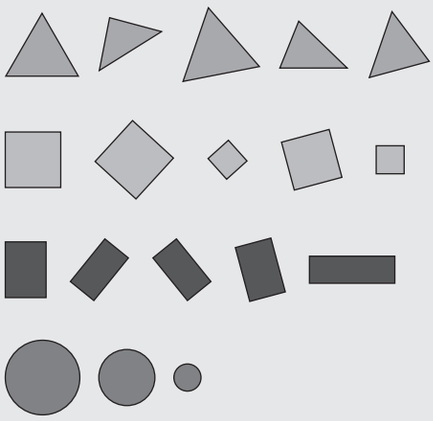
()

3. Draw a picture using different shapes. Count how many triangles, squares and rectangles were used in the picture. (Answers will vary.)

4. Colour your picture using the colours red, blue, yellow and green. (Answers will vary.)

Homework

1. Count how many of each shape there are in the drawing:
   a) Triangles (5)
   b) Squares (5)
   c) Rectangles (5)
   d) Circles (3)



2. If you change the position of a shape does the shape change? (No.)

LESSON 30: 2-D SHAPES

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.3 2-D shapes.

Lesson vocabulary: 2-D shapes, circles, triangles, squares, rectangles, size, shapes, straight sides, round sides.

Prior knowledge:
Learners should have been taught how to:

- Recognise and name 2-D shapes: circles, triangles and squares.
- Describe, sort and compare 2-D shapes in terms of: size, colour, straight sides and round sides.

Concepts:

- Recognise and name 2-D shapes – circles, triangles, squares and rectangles.
- Describe, sort and compare 2-D shapes in terms of: size, colour, shape, straight sides and round sides.

Resources: Shape cut-outs (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- N/A

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give the learners plastic shapes/shape cut-outs. Ask them to show and then name a shape with a straight side. Use your fingers to show that the sides are straight. I move my finger straight down the side. Ask the learners to show you all the other shapes with straight sides. Do the same with the shapes that have round sides (circles).

Problem solving: *Can a shape have round and straight sides?*

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 84, count backwards in fours to 68.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	11 + __ = 16	5
2.	19 – __ = 7	12
3.	15 + __ = 9	4
4.	16 – __ = 2	14
5.	14 + __ = 16	2

	Calculate:	Answer
6.	20 – __ = 1	19
7.	18 + __ = 20	2
8.	12 – __ = 2	10
9.	13 – __ = 10	3
10.	15 – __ = 3	12

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Do this activity practically with the learners.
- Give the learners a selection of plastic shapes/shape cut-outs of different sizes.
- Show the learners how to trace the sides of a circle and a triangle with their fingers.
- Ask: *What is difference between these two shapes?* (The triangle has straight sides. The circle has round sides.) The triangle has 3 sides, the circle has one round (curved) side.)
- Ask the learners to trace the sides of a rectangle and a circle with their fingers.
- Ask: *What is difference between these two shapes?* (The rectangle has straight sides. The circle has round sides. The rectangle has 4 sides, the circle has one round (curved) side.)
- Ask the learners to trace the sides of a rectangle and a square with their fingers.
- Ask: *What is difference between these two shapes?* (The rectangle and the square both have straight sides. The rectangle and the square both have 4 sides.)
- Ask the learners to trace the sides of a rectangle and a triangle with their fingers.
- Ask: *What is difference between these two shapes?* (The rectangle and the rectangle both have straight sides. The rectangle has 4 sides. The triangle has 3 sides.)
- Ask the learners to sort the shapes according to straight and round sides:
  - *Straight sides*: triangles, squares and rectangles.
  - *Round sides*: circles.
- Ask the learners to sort the shapes according to the number of sides:
  - *Three sides*: triangles.
  - *Four sides*: squares and rectangles.
  - *One side*: circles.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

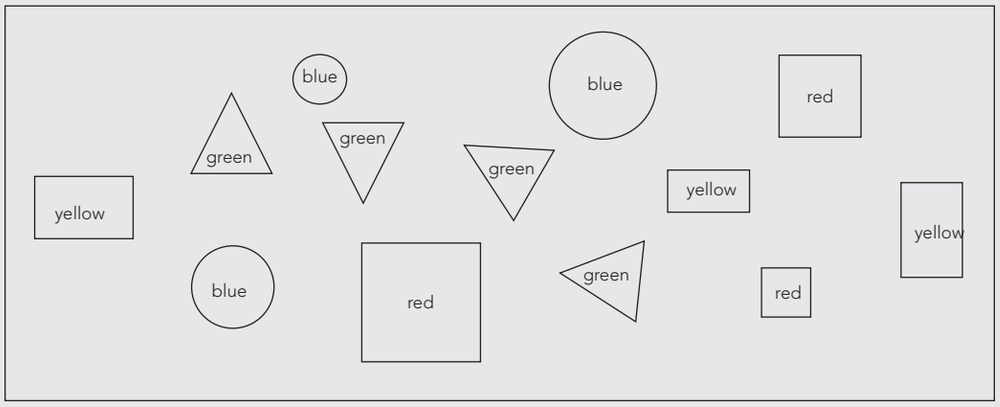
Term 2 Lesson 30: 2-D shapes

Classwork

1. Draw and name two shapes with straight sides. (Any two of square, rectangle, triangle.)
2. Draw and name a shape with round sides. (Circle, some might say oval – this is also correct.)
3. Use all the shapes you know with straight sides to draw your own picture. (Answers will vary.)
4. Use all the shapes with round sides that you know to draw your own picture. (Answers will vary.)
5. Choose one shape with straight sides and one shape with round sides to make your own pattern. (Answers will vary.)

Homework

1. Colour the squares red, the triangles green, the circles blue and the rectangles yellow.



2. How many triangles are there in the drawing? (4)
3. How many circles are there in the drawing? (3)
4. How many rectangles are there in the drawing? (3)
5. How many squares are there in the drawing? (3)
6. Write on each shape whether the sides are round or straight. (Squares – straight sides; rectangles – straight sides; circles – round sides; triangles – straight sides.)

LESSON 31: GEOMETRIC PATTERNS

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 2.1 Geometric patterns.

Lesson vocabulary: Patterns, geometric patterns, shapes, circle, square, triangle, physical objects.

Prior knowledge:
Learners should have been taught how to:

- Identify, describe in words and copy geometric patterns in nature, from modern everyday life and our cultural heritage.
- Create and describe own geometric patterns with physical objects and by drawing lines, shapes or objects.

Concepts:

- Copy, extend and describe in words simple patterns made with physical objects, drawings of lines, shapes or objects.
- Create and describe own geometric patterns with physical objects, by drawing lines, shapes or objects.

Resources: Scrap paper, shape cut-outs (see *Printable Resources*).

DBE workbook activities relevant to this lesson:

- N/A

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners Unifix cubes and shapes to make patterns. Ask them to form patterns which use: circles of differing colours, Unifix cubes that form a shape that then increases in size, and groups of shapes where the size of the shape remains the same but the number of shapes used to make the pattern increases. Discuss each pattern. *How is it formed and how can it be repeated/extended?*

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Put learners into pairs. Pairs then count forwards and backwards in 5s from 35 to 150. Each of the pair take turns to give the next number.

1.2 Mental mathematics activity (10 minutes)

	What is 10 more than:	Answer
1.	40	50
2.	32	42
3.	12	22
4.	13	23
5.	20	30

	What is 10 less than:	Answer
6.	33	23
7.	12	2
8.	45	35
9.	42	32
10.	50	40

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Discuss geometric patterns – *What are they and how are they made?* (Patterns made out of shapes repeating in different ways. Encourage learners to talk about different geometric patterns they can think of.)
- Ask some learners to come and draw some geometric patterns on the board.
- Discuss a few examples that learners draw for the class (two or three examples). Talk about the kinds of patterns they draw.

Activity 2: Whole class activity

- Some patterns are made up from the same kind of shape, but every time the shape increases or decreases in size.
- Draw the patterns below (one at a time) to illustrate some of the different kinds of geometric patterns to your class.

- This pattern has identical groups of shapes or objects that are repeated, with the size of the shape in each group changing in a regular, predictable way, e.g. the shape becomes bigger.
- Draw another example on the board (use squares maybe) and ask learners to expand it.

- In this pattern the squares are getting smaller each time, and then the pattern repeats.
- Ask learners to draw a geometric pattern where the shapes increase or decrease in size on a piece of scrap paper.
- Allow some learners to show their patterns to the class and discuss them.

Activity 3: Learners work in groups

- Some patterns are made up of groups in which the same shapes or objects occur, but the number of the shape or object increases or decreases in a regular way.
- Draw this pattern on the board.

- Ask the learners to copy it with their shape cut-outs. Discuss how the pattern is growing.
- Allow the learners to use their shape cut-outs to make patterns of groups with different shapes and different numbers of shapes.
- Ask learners to draw a geometric pattern with different shapes and different numbers of shapes.
- Allow some learners to show their patterns to the class and discuss them. Encourage them to use the language of mathematics when they describe their patterns – the shape names, sizes and colours, for example.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

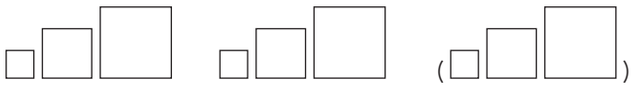
6. Reflection on lesson

Term 2 Lesson 31: Geometric patterns

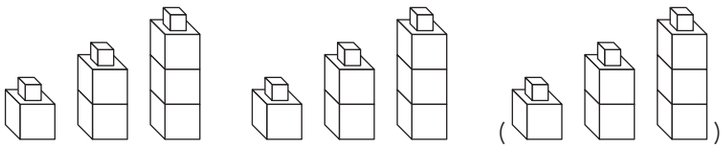
Classwork

Draw the next set of shapes in the given patterns.

1. 

2. 

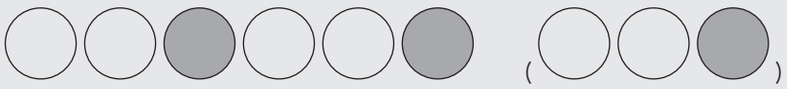
3. 

4. 

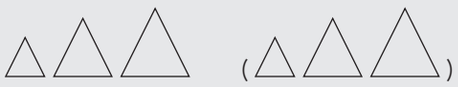
Homework

Draw the next set of shapes in the given pattern.

1. 

2. 

3. 

4. 

LESSON 32: DATA

Teacher's notes
CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 5.4 Collect and organise data, 5.5 Represent data, 5.6 Analyse and interpret data. **Lesson vocabulary:** Data, pictograph, topic, key, more, less. **Prior knowledge:** Learners should have been taught how to: • Analyse data from representations provided: pictograph. **Concepts:** • Collect data about the class or school to answer questions posed by the teacher. • Present data and answer questions in a pictograph with one-to-one correspondence. **Resources:** Old magazine/newspapers/advertisements, counters. **DBE workbook activities relevant to this lesson:** • N/A **Assessment**: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Give learners the following counters (mix them up so that the learners can sort them): 5 blue counters, 4 red counters, 8 green counters and 9 yellow counters. Ask them to draw a pictograph to represent their data. Ask them some questions such as: *How did you sort the counters? How many blue, red, green and yellow counters are there? Are there more or less red counters than green counters?* **Enrichment**: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 10s from 0 to 150.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	14 + 5 =	19
2.	12 + 6 =	18
3.	13 + 4 =	17
4.	11 + 9 =	20
5.	10 + 6 =	16

	Calculate:	Answer
6.	18 + 2 =	20
7.	15 + 1 =	16
8.	20 + 0 =	20
9.	17 + 2 =	19
10.	13 + 6 =	19

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

In this lesson learners collect some data by cutting pictures from old magazines/newspapers/advertisements. The lesson plan suggests that you should cut out pictures of men, women, boys, girls and babies. You are free to change this if you would prefer. For example, they could cut out pictures of different coloured cars, different products (e.g. soap, milk, bread, fruit and vegetables) depending on what you think will work well using the old papers you have found.

Activity 1: Learners work in groups

- Learners cut out pictures of different people (men, woman, boys, girls, and babies) from the old magazines/ newspapers/advertisements that you have collected for this lesson.
- They should cut out a total of 20 different pictures with a few of each of the following in their cut-outs:
  - Men
  - Women
  - Boys
  - Girls
  - Babies.
- Each group counts how many pictures they have in **each category** (altogether they must have 20 pictures).
- They might not all have the same numbers of pictures. Ask them to count their own pictures – the total number of pictures they should all get is 20 – that was your instruction.

Activity 2: Whole class activity

- Draw a pictograph of one of the groups' sorted data. (Pick one group.)

Number of people

Men	**Women**	**Boys**	**Girls**	**Babies**

Key: One circle = 1 person
(Or make a key that fits with the other types of pictures you asked for.)

- Allow the learners to assist you while you draw the pictograph.
- Remember to include topic and pictograph key.
- Ask learners questions about the dataset that you used, such as:
  - *How many boys are there?*
  - *How many girls are there?*
  - *Are there more boys than girls (or girls than boys)?*
  - *How many women did you cut out?*
  - *Did you cut out more children or adults?*
  - Etc.
- This is to develop their skills of graph interpretation.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 32: Data

Classwork

1. What four animals are found in the drawing? (Dog, cat, mouse, tortoise.)
2. Count up the number of each of the four types of animals.
3. Draw a pictograph to present the data.
4. Remember your topic and pictograph key.

(Solution: Cats = 4; Dogs = 12; Mice = 8; Turtles = 6, and the pictograph to represent this information. Pictograph key: 🐭 = 1 animal)

	🐭		
	🐭		
	🐭		
	🐭		
	🐭	🐭	
	🐭	🐭	
	🐭	🐭	🐭
	🐭	🐭	🐭
🐭	🐭	🐭	🐭
🐭	🐭	🐭	🐭
🐭	🐭	🐭	🐭
🐭	🐭	🐭	🐭
Cats	**Dogs**	**Mice**	**Turtles**

Homework

Complete a pictograph using this data about the number of cars in the parking lot:

- Red cars – 3
- Blue cars – 2
- Green cars – 1
- White cars – 6.

Remember your topic and pictograph key. (Pictograph key: ⊙ = 1 car)

			⊙
			⊙
			⊙
			⊙
⊙			⊙
⊙	⊙		⊙
⊙	⊙	⊙	⊙
Red	**Blue**	**Green**	**White**

WEEK 9

LESSON 33: SYMMETRY

Teacher's notes
CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.4 Symmetry.
Lesson vocabulary: Symmetry, line of symmetry, 2-D geometrical shapes, 2-D non-geometrical shapes, calculate circle, square, triangle.
Prior knowledge: Learners should have been taught how to: • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.
Concepts: • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.
Resources: Paper shapes (cut out for learners – circle, square and triangle per learner), butterfly template (see *Printable Resources* – cut one per learner), pictures of butterflies (optional – e.g. from old magazines).
DBE workbook activities relevant to this lesson: • N/A
Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Give the learners a square template and ask them to fold it in half to show a line of symmetry. Ask them to design a symmetrical pattern on each half. Discuss what symmetry is. Discuss the different ways of folding shapes to find lines of symmetry.
Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 100, count on in twos to 138.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	20 – 6 =	14
2.	19 – 4 =	15
3.	14 + 4 =	18
4.	15 + 2	17
5.	21 – 1	20

	Calculate:	Answer
6.	26 – 5 =	21
7.	24 + 4 =	28
8.	28 + 4 =	32
9.	30 + 10	40
10.	20 – 10 =	10

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Learners work in pairs

Use the prepared paper shape cut-outs.

- Give each pair of learners a paper circle, square and triangle.
- Ask them to fold all three the shapes exactly in half.
- Unfold the shapes and make a dotted line where the fold is.
- Explain to the learners that we call this the line of symmetry.
- Discuss the shape, the position of the fold in the shape and what the two halves of the shape on either side of the fold look like.

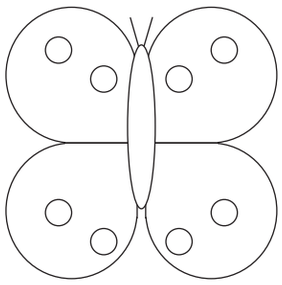
Activity 2: Whole class activity

Symmetry in ourselves –

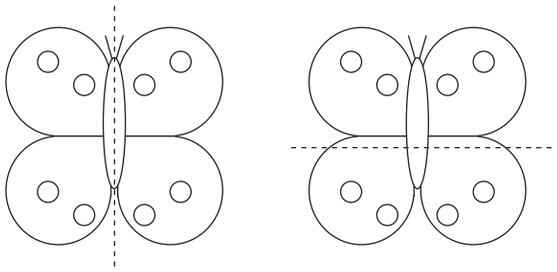
- Call a learner to the front of the class and ask the learner to stand at the front looking straight at the class.
- Discuss the symmetry of the human body. Point out:
  - one eye on each side
  - one ear on each side
  - etc.

Activity 3: Learners work individually

- Draw a butterfly on the board.



- Give each learner a copy of the butterfly template.
- Ask them to show you the line of symmetry.
- Ask them why the second picture does not show a line of symmetry.
- Colour the two side of the butterfly using colours in a symmetrical way.



4. Classwork activity (25 minutes) (See next page)

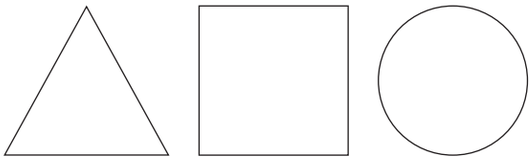
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 33: Symmetry

Classwork

1. Draw lines of symmetry in the following shapes:



(When a shape is folded exactly in half a mirror image is created.)

2. Show the lines of symmetry in these butterflies.

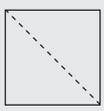
3. Draw a circle. How many lines of symmetry can you draw in a circle?

4. Draw a face. How many lines of symmetry can you draw in a face?

Homework

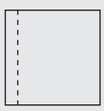
Which of the drawings below show a line of symmetry? Answer yes or no each time.

a)



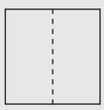
(yes)

b)



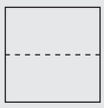
(no)

c)



(yes)

d)



(yes)

LESSON 34: SYMMETRY

Teacher's notes
CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 3.4 Symmetry. **Lesson vocabulary:** Symmetry, line of symmetry, 2-D geometrical shapes, 2-D non-geometrical shapes, calculate circle, square, triangle. **Prior knowledge:** Learners should have been taught how to: • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes. **Concepts:** • Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes. **Resources:** Shape strip (see *Printable Resources* – one per learner). **DBE workbook activities relevant to this lesson:** • N/A **Assessment**: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.
Remediation: Give the learners a rectangular template and ask them to fold it in half to show a line of symmetry. Ask them to design a symmetrical pattern on each half. Discuss what symmetry is. Problem solving: Give the learners a strip of shapes and ask them to draw in lines of symmetry where possible. Discuss the symmetrical patterns that learners draw. **Enrichment**: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 100, count on in twos to 138.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	20 – 6 =	14
2.	19 – 4 =	15
3.	14 + 4 =	18
4.	15 + 2 =	17
5.	21 – 1 =	20

	Calculate:	Answer
6.	26 – 5 =	21
7.	24 + 4 =	28
8.	28 + 4 =	32
9.	30 + 10 =	40
10.	20 – 10 =	10

2. Correction/reflection on homework (15 minutes)

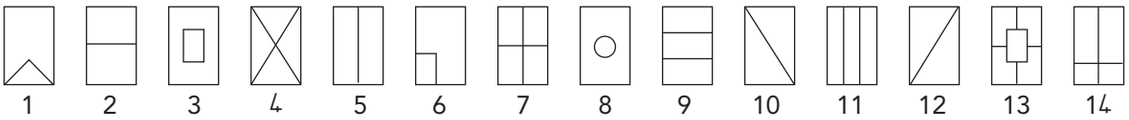
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

Draw the shapes that are on the printable shape strip on the board.

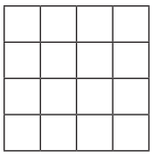
- Give each learner the shape strip. You refer to the shapes on the board, they can look at those as well as those on their own copy.



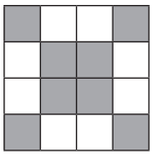
- Discuss each shape, one at a time, to decide how many lines of symmetry it has and where they go.
  - No lines of symmetry: shapes 6, 10, 12
  - One line of symmetry: shapes 1, 14
  - Two lines of symmetry: shapes 2, 3, 4, 5, 7, 8, 9, 11, 13.
- Allow the learners to identify the lines themselves and show you on the board where they must go.
- Allow some time for all of the learners to draw the lines of symmetry into their shapes on the shape strip that you gave to them.

Activity 2: Learners work in groups

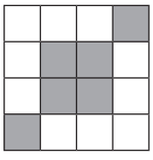
Draw a grid like this one on the board and ask the learners to copy it.



- Ask them to show you where the lines of symmetry would lie in this shape (the grid).
- The shape has 4 lines (axes) of symmetry. (The diagonals and the horizontal and vertical lines through the centre of the grid.)
- Now colour some of the blocks to make a pattern that still has 4 lines of symmetry. E.g.:
  Show how the same 4 lines of symmetry still work.



- Discuss some other grid patterns that would also have 4 lines of symmetry.
- *How many lines of symmetry does the following grid have?* (2 – The diagonals; the vertical and horizontal lines do not work now as axes of symmetry.)



4. Classwork activity (25 minutes) (See next page)

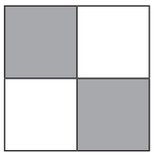
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

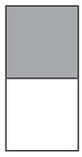
Term 2 Lesson 34: Symmetry

Classwork

1. How many lines of symmetry can you draw in these shapes? Copy the shape and draw in the lines of symmetry.

   a) 

   b) 

   c) 

   (a) = 4 lines, b) = 2 lines (horizontal and vertical), c) = 1 line (vertical))

2. Draw a square grid with 9 blocks.
   (Answers will vary. Check that learners have drawn patterns with the correct symmetries.)
   a) Make a pattern in it that has 2 lines of symmetry.
   b) Make a pattern in it that has 4 lines of symmetry.

Homework

1. Draw a shape with:
   a) One line of symmetry
   b) Two lines of symmetry
   c) Four lines of symmetry.

2. Draw the lines of symmetry in your shapes.

(Answers will vary. Check that learners have drawn patterns with the correct symmetries.)

LESSON 35: FRACTIONS

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.10 Sharing leading to fractions, 1.16 Mental mathematics, 1.17 Fractions.

Lesson vocabulary: Fractions, halves, quarters, thirds, fifths, calculate, fraction circles, share, divide, equal parts.

Prior knowledge:
Learners should have been taught how to:

- Recognise fractions in diagrammatic form.

Concepts:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form.
- Write fractions as 1 half, 2 thirds.

Resources: Fruit picture cards (see printable – one copy per group).

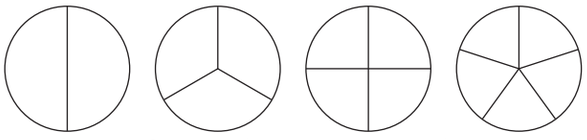
DBE workbook activities relevant to this lesson:

- DBE worksheet 60 (pp. 128 and 129).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Cut any fruit into halves, quarters and thirds. Ask the learners each time: *Between how many children can you share it?* I can share this between two children (halves). I can share this amongst three children (thirds). I can share this amongst five children (fifths). I can share this amongst four children (quarters).

Problem solving: *Mom bakes a cake. It is for me and my three friends. How many equal parts should she cut it into?* Use fraction circles to show how to find the answers to these problems.



Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s and 10s from 0 to 150.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	__ + 9 = 9	0
2.	__ + 3 = 7	4
3.	__ + 4 = 5	1
4.	__ + 1 = 7	6
5.	__ + 8 = 10	2

	Calculate:	Answer
6.	__ + 7 = 9	2
7.	__ + 2 = 7	5
8.	__ + 10 = 10	0
9.	__ + 6 = 9	3
10.	__ + 5 = 10	5

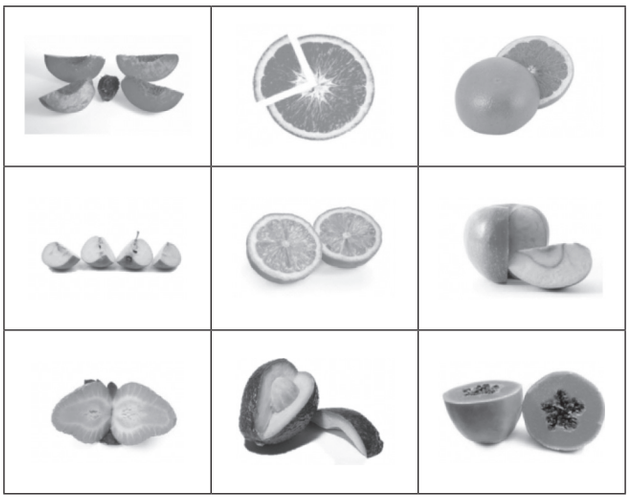
2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Learners work in pairs

- Give each pair of learners a fruit pictures card.
- Discuss each of the fruits: think about their colour, taste and texture.
- Then ask the learners the following questions while still looking at the pictures/fruit:
  (Make sure all of the learners are able to recognise the fraction parts into which the different fruit have been cut.)



  - *Which fruits are divided into halves?* (Whole orange, strawberry, paw paw.)
  - *Which fruits are divides into quarters?* (Nectarine, apple.)
  - *From which fruit was one quarter cut?* (Orange slice, apple, avocado.)
  - *How many equal parts makes fifths?* (5) *Are any of these fruits in fifths?* (No.)

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

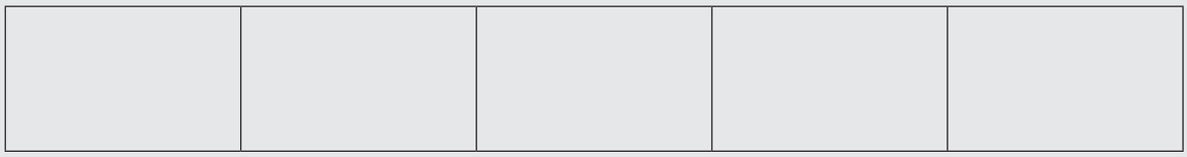
Term 2 Lesson 35: Fractions

Classwork

1. Draw a picture of an apple, orange, tomato and a banana. Share these fruits between two children. (Halves.)
2. Use the same fruit but share them amongst four children this time. (Quarters.)
3. I have an orange cut in fifths. How many children can share the orange? Draw pictures. (Five.)
4. I have an apple cut into quarters. Can I share it between two or four children? (Four – each get one; two – each get two.)
5. I have a mango. Cut it to share it between three children. How much mango do they each get? (1 third.)

Homework

1. Draw a picture of a round cake. Share the cake equally between you and your friend. (Halves.)
2. I cut an apple into quarters. How many children will get a piece of apple each? (Four.)
3. I cut an orange into quarters. I share it between two children. How many pieces will each child get? (Two.)
4. Draw a rectangle and divide it into fifths.



LESSON 36: FRACTIONS

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.10 Sharing leading to fractions, 1.16 Mental mathematics, 1.17 Fractions.

Lesson vocabulary: Fractions, halves, quarters, thirds, fifths, calculate, share equally, between.

Prior knowledge:
Learners should have been taught how to:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form.

Concepts:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form and write fractions as 1 half, 2 thirds.
- Use techniques like drawings or concrete apparatus, e.g. counters, when solving problems and explain solutions to problems.

Resources: Scrap paper.

DBE workbook activities relevant to this lesson:

- DBE worksheet 61 (pp. 130 and 131).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Cut any fruit, e.g. an apple or orange, into halves, quarters and thirds or use fruit pictures. Ask the learners each time: *Between how many children can you share it?* I can share this between two children (halves). I can share this amongst three children (thirds). I can share this amongst four children (quarters). Ask the learners to share the following equally between 2 children: 3 apples (each child gets one and a half apple). 5 apples (each child gets two and a half apples). Share the following equally amongst 3 children: 4 apples (each child gets one and one third apple). 7 apples (each child gets two and one third apples). Share the following equally amongst 4 children: 5 apples (each child gets one and a quarter apples). 8 apples (each child gets two apples). Etc.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 132, count on in ones to 150.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	__ – 3 = 7	10
2.	__ – 5 = 2	7
3.	__ – 9 = 1	10
4.	__ – 8 = 1	9
5.	__ – 6 = 2	8

	Calculate:	Answer
6.	__ – 4 = 0	4
7.	__ – 7 = 2	9
8.	__ – 0 = 10	10
9.	__ – 1 = 3	4
10.	__ – 2 = 4	6

2. Correction/reflection on homework (15 minutes)

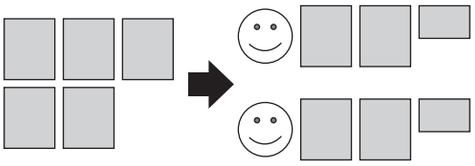
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

This activity is practical. It is essential that you allow learners to work with the scrap paper while they do the sharing. The activity is designed so that you make best possible use of the scrap paper as learners can re-use the whole sheets as they work through the different sharing tasks. Each time they should only fold and tear the piece that needs to be broken up.

Activity 1: Learners work in groups

- Give each group of learners some sheets of scrap paper. Neatly tear each piece of paper in half if you need to, so that you can give each group 10 sheets of paper.
- Discuss the following sharing problems, allowing the learners to work out the answers using the scrap paper.
- Share 5 sheets of paper equally between two children. *How many sheets will each child get?* (Two and a half sheets of paper.)



- Share 5 sheets of paper equally between four children. *How many sheets of paper will each child get?* (One and one quarter sheets of paper.)

Activity 2: Learners work in groups

- Put aside the papers that you have divided up into fraction parts and re-use the whole scrap paper sheets.
- Share 4 sheets of paper equally between three children. *How many sheets of paper will each child get?* (One and one third sheets of paper.)
- Share 3 sheets of paper equally between two children. *How many sheets of paper will each child get?* (One and one half sheets of paper.)

4. Classwork activity (25 minutes) (See next page)

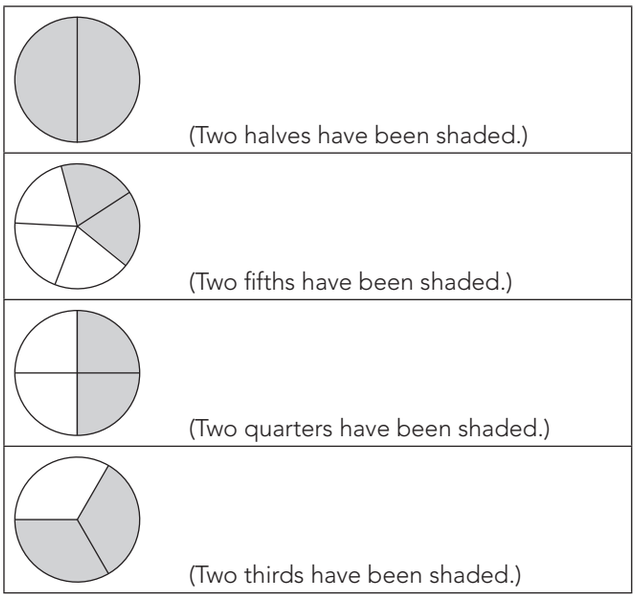
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 36: Fractions

Classwork

1. Copy and label the fraction parts that the circles have been divided into. Colour two of each of the parts and write the amount you have shaded under each drawing. (Do not shade the undivided whole.)



2. Draw 2 children, 2 apples and 2 halves of an apple. How much fruit will each child get? (One and one half of an apple.)

3. Draw 2 children, 4 oranges and 2 quarters of an orange. How much fruit will each child get? (Two and one quarter oranges.)

4. Share 3 oranges equally between 3 children. Each child gets: _ (One orange.)

5. Share 4 oranges equally between 3 children. Each child gets: _ (One and one third oranges.)

Homework

1. Share 4 oranges equally between 2 children. Each child gets: _ (Two oranges.)

2. Share 4 bananas equally between 3 children. Each child gets: _ (One and one third bananas.)

3. Share 5 tomatoes equally between 4 children. Each child gets: _ (One and one quarter tomatoes.)

4. Share 6 mangoes equally between 5 children. Each child gets: _ (One and one fifth mangoes.)

WEEK 10

LESSON 37: FRACTIONS

Teacher's notes

CAPS topics: 1.1 Counting objects, 1.2 Count forwards and backwards, 1.10 Sharing leading to fractions, 1.12 Techniques (methods or strategies), 1.16 Mental mathematics, 1.17 Fractions.

Lesson vocabulary: Fractions, halves, half, halve, double, quarters, thirds, fifths, equally.

Prior knowledge:
Learners should have been taught how to:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form.

Concepts:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form.
- Write fractions as 1 half, 2 thirds.

Resources: Scrap paper – cut into squares for learners.

DBE workbook activities relevant to this lesson:

- DBE worksheet 62 (pp. 132 and 133).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners papers in a variety of sizes. You need to prepare it beforehand. Make use of recycled paper. Ask learners to choose any piece of paper and to fold it in half. Note that the way learners fold the paper could be different. Make sure they fold it into two exactly equal pieces. Do the same activity folding the papers into quarters. You can also add pieces of paper cut into triangles and circles.

Problem solving: *How many times should you fold a paper to get: halves, quarters, thirds, fifths?*

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 3, count on in threes to 30.

1.2 Mental mathematics activity(10 minutes)

	Double:	Answer
1.	5	10
2.	7	14
3.	9	18
4.	11	22
5.	12	24

	Halve:	Answer
6.	20	10
7.	18	9
8.	16	8
9.	10	5
10.	4	2

2. Correction/reflection on homework (15 minutes)

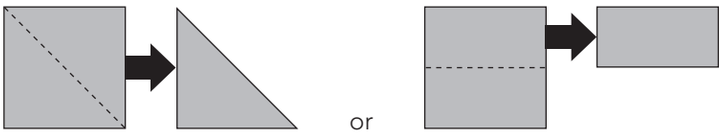
Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

You need to prepare some square sheets of scrap paper for this lesson.

Activity 1: Whole class activity

- Give each learner a piece of square paper to use for the following activity.
- Learners fold their papers in half and name each part. It is important that they understand that when you make two equal parts from something, you call each part a *half*.
- Fold the piece of paper into half again. The importance here is to fold the page in different ways to obtain a different-looking half. Always ask learners to predict how many pieces they will get and allow them to unfold the page and check.



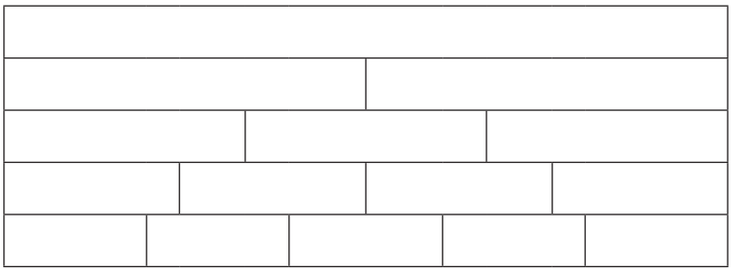
- Comparing the two different half shapes can lead to interesting conversations on shape and size.
- Ask the learners: *Can I call these two shapes by the same number name, namely one half?* (Yes.)
- Do the same for different quarter shapes that you fold using a square of paper.

Activity 2: Learners work in groups

- With other pieces of paper experiment with the learners on how to fold a piece of paper into other fraction parts:
  - thirds
  - quarters
  - fifths
  - sixths.
- Repeat the questioning to consolidate that parts of equal size give us fraction parts and they are named according to how many parts the whole was divided into. (For example, if I have 5 equal sized parts I have fifths.)
- Discuss the idea that even if shapes look different they can be the same size, if they have been made by folding into equal parts. (For example, if I have folded a square into sixths in two different ways, I have still found sixths both times.)

Activity 3: Whole class activity

- Draw this grid on the board.



- Discuss the way in which the grid has been divided into fraction parts.
- Label the fraction parts in your gird on the board as you discuss them with the class. (Label each row in the fraction table – whole, halves, thirds, quarters, fifths.)
- Leave the grid on the board for learners to refer to when they do the classwork activity.

4. Classwork activity (25 minutes) (See next page)

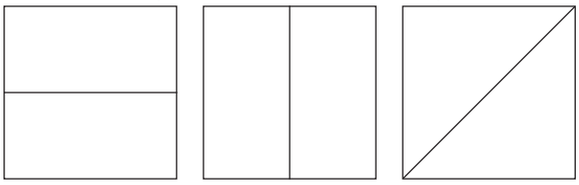
5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

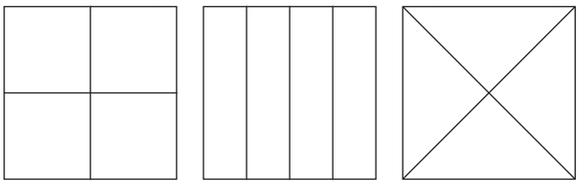
Term 2 Lesson 37: Fractions

Classwork

1. Draw three squares and divide each square into halves showing a different way each time.



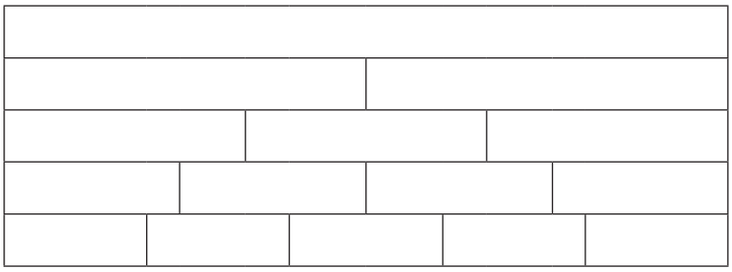
2. Draw three squares and divide each square into quarters showing a different way each time.



3. Can you divide a triangle in half, in more than one way? Show it. (No, only 1 way.)

4. Can you divide a circle into quarters, in more than one way? Show it. (No, only 1 way.)

5. Name the fraction parts into which each row of this table has been divided:



(Rows in order from the top: whole, halves, thirds, quarters, fifths.)

Homework

(Learners must do these drawings, as shown in the classwork activity solutions above. Check that they have divided their shapes into equal-sized parts.)

1. Draw 3 rectangles. Divide each one into halves showing different ways.

2. Draw 2 squares. Divide each one into quarters showing different ways.

3. Choose one shape and divide it into thirds: a rectangle, square, circle or a triangle.

4. Choose one shape and divide it into fifths: a rectangle, square or a circle.

LESSON 38: FRACTION PROBLEMS

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.10 Sharing leading to fractions, 1.6 Problem solving, 1.16 Mental mathematics, 1.17 Fractions.

Lesson vocabulary: Fractions, halves, quarters, thirds, fifths, apparatus, calculate, share equally, amongst, between.

Prior knowledge:
Learners should have been taught how to:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.

Concepts:

- Solve word problems in context and explain own solutions to problems that involve equal sharing leading to solutions that include unitary fractions halves, quarters, thirds and fifths.
- Write fractions as 1 half, 2 thirds.
- Use techniques like drawings or concrete apparatus, e.g. counters, when solving problems and explain solutions to problems.

Resources: Counters.

DBE workbook activities relevant to this lesson:

- DBE worksheet 63 (pp. 134 and 135).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Solve the following problem: Miles, Mathew and Ndaweni share 4 fruit bars. *How can they share them equally?* Draw a picture to show your answer. Ask the learners to answer the following questions: *What is the question? How can they share them equally?* Keywords: *share equally. It must be shared by how many children?* (3) *What are the numbers?* (3 children and 4 fruit bars) Draw a picture to show this.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Ask the learners to start at 120, count backwards in ones to 98.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	__ + 3 = 10	7
2.	__ – 9 = 1	10
3.	__ + 4 = 8	4
4.	__ – 2 = 7	9
5.	__ + 1 = 10	9

	Calculate:	Answer
6.	__ – 7 = 3	10
7.	__ + 5 = 15	10
8.	__ – 2 = 2	4
9.	__ + 6 = 9	3
10.	__ – 3 = 2	5

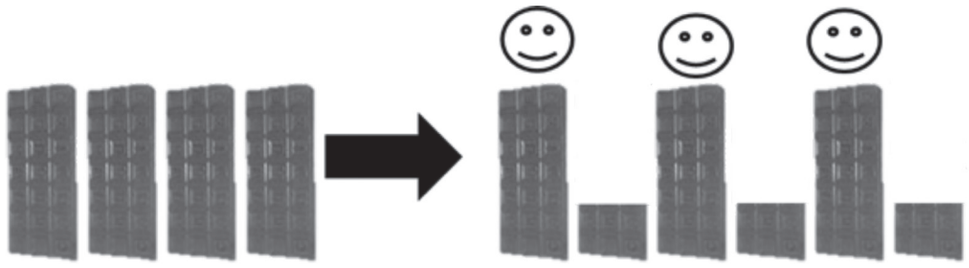
2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Discuss the solution of the problem together with your class.
- Read the problem with your learners. Ask them to repeat it.
- Erin, Tawfiq and Thami must share four chocolate bars equally. How much of the chocolate bars will each child get? Draw a picture to show your answer or cut pictures of chocolate slabs from magazines or newspapers. You could draw this picture on your chalkboard.



  - *What is the question?* How much of the chocolate bars will each child get?
  - *What are the key words?* Share equally.
  - *How should it be shared?* It must be shared equally amongst how many children?
  - *Say the question again in your own words: I* can say that 4 chocolate bars must be shared equally between 3 children.
  - *What are the numbers?* 3 children and 4 chocolate bars.
  - *Use a drawing if necessary:* Learners make a drawing to show the answers.
- Make up other word problems to solve with your class before they move onto the classwork activity.
- For example:
  - I have 6 biscuits and I want to share them among 3 learners. What fraction of the biscuits will each learner get? (One third) How many biscuits will each of them get? (2 biscuits)
  - I have 2 small cakes to share between 3 friends. What fraction of the cakes will each learner get? (One third) How many cakes will each of them get? (1 and one third)
  - Lebo, Tsepo, Roz and Sam have 5 chocolate bars to share equally. How much of the chocolate bars will each child get? (1 and two fifth each)
- Make up word problems using the names of your learners and things that they like to share.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 38: Fraction problems

Classwork

1. Serebolo and Jamie share 1 piece of chocolate. Jamie says that they must each get one half. Is she correct? (Yes.) Draw a picture to show your answer.

2. Erin, Tawfiq and Thami must share 7 chocolate bars equally. How much chocolate will each child get? Draw a picture to show your answer. (Two and one third.)

3. Miles, Hannah, Mathew and Ndaweni share 5 fruit bars. How can they share them equally? Draw a picture to show your answer. (One and one quarter.)

4. Mohamed and Khala share 3 pieces of chocolate. Khala says that they must each get one and a half. Is she correct? (Yes.) Draw a picture to show your answer.

Homework

1. Anu, Zami, Dan and Lemuel share 2 fruit bars. How can they share them equally? Draw a picture to show your answer. (One half.)

2. Sam, Farhana and Thandy must share 5 chocolate bars equally. How much chocolate will each child get? Draw a picture to show your answer. (Two and one third.)

LESSON 39: TIME

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 4.1 Time.

Lesson vocabulary: Time, hours, half hours, analogue clock, long hand, short hand, clock face, calculate, am (morning), pm (afternoon), past, to.

Prior knowledge:
Learners should have been taught how to:

- Understand time which was covered on an on-going basis during whole-class teaching time.

Concepts:
- Tell 12-hour time in hours on analogue clocks.

Resources: Analogue clock (see *Printable Resources*), paper plates, clock arms, split pins (optional – for learners to make a clock), clock cards (see *Printable Resources*).

DBE workbook activities relevant to this lesson:
- Worksheet 57a (pp. 120, 121)
- Worksheet 57b (pp. 122, 123)

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Let the learners make their own clocks. Use paper plates, cardboard (for the hands), a split pin and crayons to decorate it. Draw the face of the clock on the paper plate. Cut a long and a short arm from the cardboard and attach it to the middle of the paper plate with the split pin. Ask the learners to show you specific times on their clocks using only o'clock, e.g. 3 o'clock, 4 o'clock.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count reliably to at least 100 everyday objects.
- Count forwards in 4s from 4 to 48.
- Count backwards in 4s from 85 to 4.

1.2 Mental mathematics activity (10 minutes)

Write down the following numbers in order, from the smallest to the greatest.

		Answer
1.	8, 5, 9	5, 8, 9
2.	14, 11, 15	11, 14, 15
3.	21, 19, 23	19, 21, 23
4.	12, 14, 10	10, 12, 14
5.	17, 20, 12	12, 17, 20

		Answer
6.	12, 21, 19	12, 19, 21
7.	14, 17, 12	12, 14, 17
8.	22, 14, 21	14, 21, 22
9.	24, 19, 25	19, 24, 25
10.	9, 7, 4	4, 7, 9

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Explain to the learners that on most analogue clock faces there are two hands, and one is longer than the other.
- Show learners a clock that illustrates this (use the *Printable Resource* if necessary, but bring a large real clock to school if possible).
- The short hand tells you what hour it is. When the short hand is pointing right at the number 3 it is 3 o'clock. The long hand should be exactly on the 12.
- When the short hand is pointing somewhere between the number 2 and 3 it is somewhere between 2 and 3 o'clock.
- Give the learners clock cards (see *Printable Resource*) and ask them to read the time on each.
- Discuss many different times using the clock faces to demonstrate these each time.

Activity 2: Whole class activity

- Write times randomly on the board – from 1 o'clock to 12 o'clock.
- Ask a different learner to come up and draw a clock face to show each of the times.
- Ask learners to sort the times in numeric order.
- Discuss the sorting.
- Ask: *If the times are all in numeric order – do you know if it is night or day?*
- Talk about the difference between day and night time.
- Ask the learners to make their own sentences about what they do at different times of the day and night, e.g.
  - At 1 o'clock in the morning I am sleeping. At 1 o'clock in the afternoon I am at school.
  - At 8 o'clock at night I go to bed. At 8 o'clock in the morning school starts.
  - Etc.

Activity 3: Learners work in groups (Optional)

- Make clocks using paper plates, clock arms, split pins.
- Use your clock faces to show different times to your group, saying clearly where the long arm and the short arm must be to indicate the time you give.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 39: Time

Classwork

1. Draw clock faces in your mathematics book to show the following times. Write the time underneath each clock.
   (Only one face is illustrated. Make sure that the learners draw the long arm and the short arm in the correct place each time.)
   a) 11 o'clock

   b) 9 o'clock
   c) 2 o'clock
   d) 3 o'clock
   e) 12 o'clock
   f) 5 o'clock
   g) 7 o'clock

2. Draw a picture to show what you can do at 3 o'clock in the morning. (Answers will vary, e.g. sleeping.)

3. Draw a picture to show what you can do at 3 o'clock in the afternoon. (Answers will vary, e.g. playing outside, homework.)

Homework

1. Draw a clock that shows 7 o'clock.

2. Draw a picture of something you do at 7 o'clock in the morning. (Answers will vary, e.g. eat breakfast, walk to school, etc.)

3. Draw a clock that shows 12 o'clock. (The long arm and the short arm of the clock must both be on the 12.)

4. Draw a picture of something you do at 12 o'clock in the afternoon. (Answers will vary, e.g. playing during break at school.)

LESSON 40: TIME

Teacher's notes

CAPS topics: 1.1 Count objects, 1.2 Count forwards and backwards, 1.16 Mental mathematics, 4.1 Time.

Lesson vocabulary: Time, hours, half hours, analogue clock, long hand, short hand, clock face, calculate, am (morning), pm (afternoon), past, to.

Prior knowledge:
Learners should have been taught how to:

- Deal with time continuously during whole-class teaching time.

Concepts:
- Tell 12-hour time in hours on analogue clocks.
- Use clocks to calculate length of time in hours or half hours.

Resources: Analogue clock (see *Printable Resources*), digital clock (bring from home).

DBE workbook activities relevant to this lesson:
- DBE worksheet 55 (pp. 116 and 117).

Assessment: Refer to the tracker for today's formal/informal oral, practical or written assessment activity.

Remediation: Give learners a clock. Ask them to show you 10 o'clock on the clock. Ask learners where is the long hand? (On the 12) Where is the short hand? (On the 10) Do the same with 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 o'clock. Show learners half past one. Where is the short hand? (Between the 1 and 2) Where is the long hand? (On the 6) Do the same with half past 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12. Now count in fives from 5 past to half past 6. Learners should realize that half an hour and 30 minutes are the same.

Enrichment: See enrichment activity cards.

1. Mental mathematics

1.1 Counting (5 minutes)

- Count forwards and backwards in 5s from 50 to 150.

1.2 Mental mathematics activity (10 minutes)

	Calculate:	Answer
1.	15 + 5 =	20
2.	15 – 5 =	10
3.	5 + 10 =	15
4.	10 – 5 =	5
5.	5 + 15 =	20

	Calculate:	Answer
6.	20 – 5 =	15
7.	20 + 5 =	25
8.	10 – 10 =	0
9.	5 + 20 =	25
10.	10 + 15 =	25

2. Correction/reflection on homework (15 minutes)

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development (30 minutes)

Activity 1: Whole class activity

- Discuss am (morning) and pm (afternoon) and the type of activities we do in the morning and in the afternoon.
- Draw an analogue clock on the board/use a wall clock.
- Discuss how the long hand moves around the full circle once for an hour to pass. Demonstrated to the learners using your wall clock.
- Show 2 o'clock on the clock face. *Where is the long hand and where is the short hand?* (The long hand is on the 12 and the short hand is on the 2.)
- Show 5 o'clock. *Where is the long hand and where is the short hand?* (The long hand is on the 12 and the short hand is on the 5.)
- Show 6 o'clock. *Where is the long hand and where is the short hand?* (The long hand is on the 12 and the short hand is on the 6.)
- Discuss other times if learners still need more practice.

Activity 2: Whole class activity

Refer to the analogue clock printable.

- Label the two halves of the analogue clock face. One *past* and one *to*.

- Put a red circle around the 6 to highlight half past.
- Learners count in 5s to 30 using an analogue clock.
- Show half past two. *Where is the long hand and where is the short hand?* (The long hand is on the 6 and the short hand is on the half way between the 1 and the 2.)
- Show half past five. *Where is the long hand and where is the short hand?* (The long hand is on the 6 and the short hand is on the half way between the 5 and the 6.)
- Show half past eight. *Where is the long hand and where is the short hand?* (The long hand is on the 6 and the short hand is on the half way between the 8 and the 9.)
- Ask learners to come forward to show various half past times to the class.

Activity 3: Learners work in pairs

- Learners should draw analogue clocks to show the two times and then calculate the answer.
- It is 6 o'clock. At half past 6 you have to eat breakfast. How long is it before you will eat? (30 minutes or half an hour)
- It is 7 o'clock. At 8 o'clock the first lesson starts. How long is it until your first lesson? (1 hour)
- Make up one question about time passing for your partner.
  - Partners swop questions and work out the solutions.
  - Partners discuss the answers they got.

4. Classwork activity (25 minutes) (See next page)

5. Homework activity (5 minutes) (See next page)

6. Reflection on lesson

Term 2 Lesson 40: Time

Classwork

1. Draw a clock showing 9 o'clock.

2. Draw a clock showing half past 3.

3. Name two things that you can do during *am* time. (Answers will vary, e.g. sleep, go to school, etc.)

4. Name two things that you can do during *pm* time. (Answers will vary, e.g. eat supper, watch television, etc.)

5. You leave for school at half past 6 in the morning. You get to school at 7 o'clock. How long did you take to get to school? (30 minutes.)

6. On Saturday your Granny comes to tea. She arrives at 10 o'clock and leaves at half past 12. How long was she at your house? (2 hours 30 minutes.)

Homework

1. Draw a clock showing 4 o'clock.

2. Draw a clock showing half past 6.

3. Draw a clock showing 9 o'clock.

4. It is 3 o'clock. You do your homework until half past 4. How long did you take to do your homework? (One and a half hours.)

PRINTABLE RESOURCES

Resource Sheets

This is a list of the mathematical resources that you will need this term. You need to make sure that you have them for the lessons for which they are recommended.

1. Number symbol and name cards (21–30) (Lesson 2)
2. Number symbol and name cards (31–40) (Lesson 4)
3. Number symbol and name cards (41–50) (Lesson 6)
4. Directional arrow cards (Lesson 21)
5. Position word cards (Lesson 22)
6. 1–150 number board (Lesson 24, 25 and 26)
7. 1–150 number lines 0-160 (Lesson 17 and 20)
8. 2s multiplication and division hand-out (Lesson 27)
9. 5s multiplication and division hand-out (Lesson 28)
10. Analogue clock (Lesson 39 and 40)
11. Clock cards (Lesson 39)
12. Mixed shapes (Lesson 29)
13. Shape cut-outs (Lesson 29, 30, 31 and 33)
14. Butterfly template (Lesson 33)
15. Shape strips (Lesson 34)
16. Fruit picture cards (Lesson 35)

Resources for each day of teaching

There are also other resources such as informal ones (old magazines, pieces of string, scrap paper, etc.) that you may need in certain lessons. You should take a careful look at the list of resources needed for each lesson; this list is given in the lesson plan each day. Prepare yourself, so that you have the necessary resources for the lessons on a daily basis.

1. Number symbol and name cards (21–30) (Lesson 2)

21	twenty one
22	twenty two
23	twenty three
24	twenty four
25	twenty five

26	twenty six
27	twenty seven
28	twenty eight
29	twenty nine
30	thirty

1. Inani namakhadi anamanani 21-30 (Isifundo 2)

21	amashumi amabini ananye
22	amashumi amabini anambini
23	amashumi amabini anesithathu
24	amashumi amabini anane
25	amashumi amabini anesihlanu

26	amashumi amabini anesithandathu
27	amashumi amabini anesixhenxe
28	amashumi amabini anesibhozo
29	amashumi amabini anesithoba
30	amashumi am-athathu

2. Number symbol and name cards (31–40) (Lesson 4)

31	thirty one
32	thirty two
33	thirty three
34	thirty four
35	thirty five

36	thirty six
37	thirty seven
38	thirty eight
39	thirty nine
40	forty

2. Inani namakhadi anamanani 31-40 (Isifundo 4)

31	amashumi am-athathu ananye
32	amashumi am-athathu anambini
33	amashumi amathathu anesithathu
34	amashumi amathathu anane
35	amashumi amathathu anesihlanu

36	amashumi amathathu anesithandathu
37	amashumi amathathu anesixhenxe
38	amashumi amathathu anesibhozo
39	amashumi amathathu anesithoba
40	amashumi amane

3. Number symbol and name cards (41–50) (Lesson 6)

41	forty one
42	forty two
43	forty three
44	forty four
45	forty five

46	forty six
47	forty seven
48	forty eight
49	forty nine
50	fifty

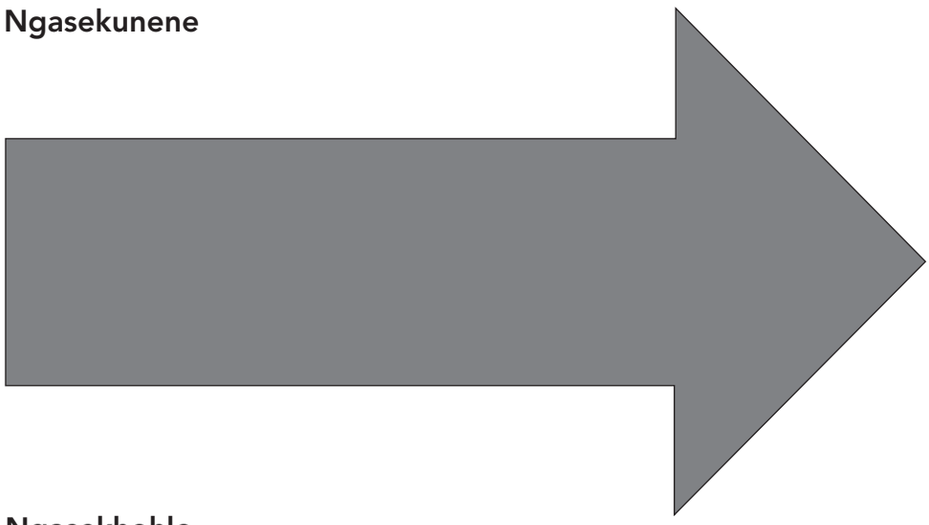
3. Inani namakhadi anamanani 41–50 (Isifundo 6)

41	amashumi amane ananye
42	amashumi amane anambini
43	amashumi amane anesithathu
44	amashumi amane anane
45	amashumi amane anesihlanu

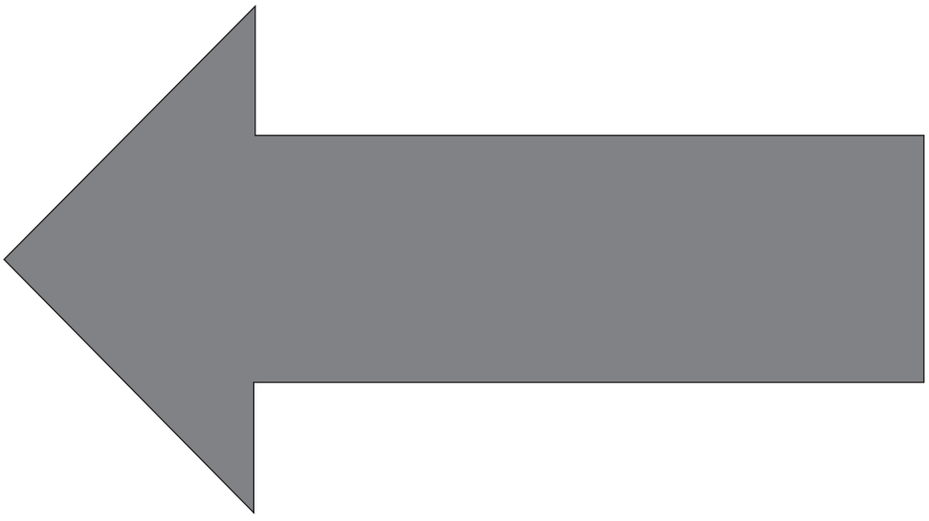
46	amashumi amane anesithandathu
47	amashumi amane anesixhenxe
48	amashumi amane anesibhozo
49	amashumi amane anesithoba
50	amashumi amahlanu

4. Amacala ezijonge kuwo iintolo (Isifundo 21)

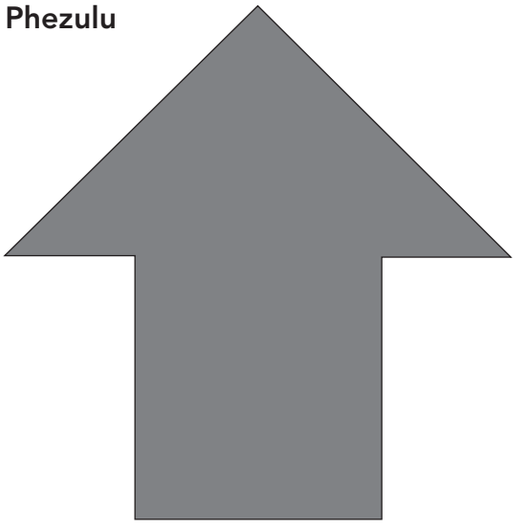
Ngasekunene



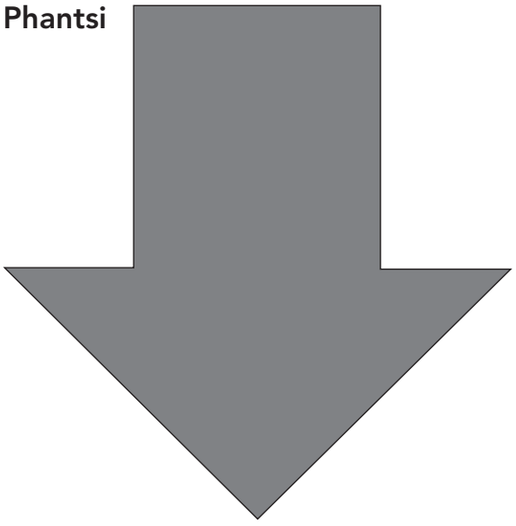
Ngasekhohlo



Phezulu



Phantsi



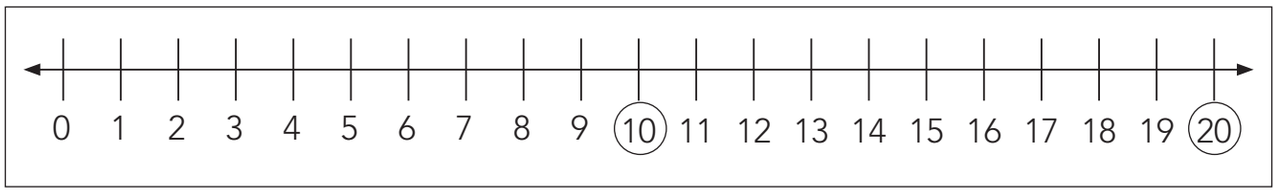
5. Amakhadi anamagama ezikhundla (Isifundo 22)

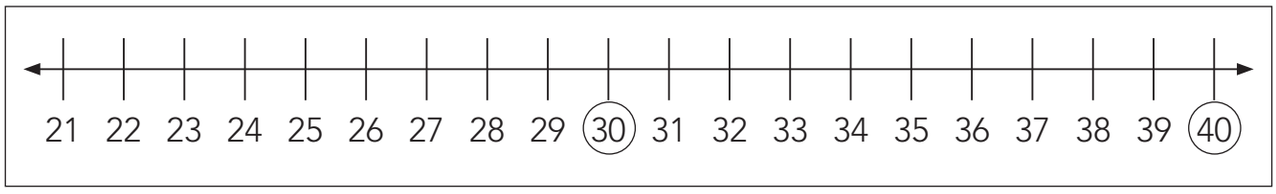
ngaphezu kwe	
ngaphambi kwe	
ngasemva kwe	
ngasekhohlo	ngasekunene
phezulu	phantsi
ecaleni kwe	

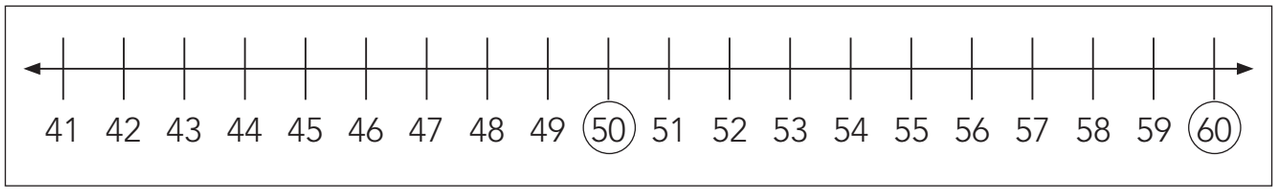
6. Ibhodi yamanani 1-150 (Isifundo 24, 25, nesama- 26)

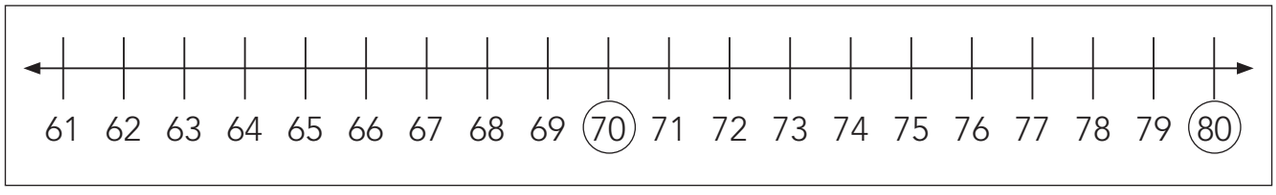
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150

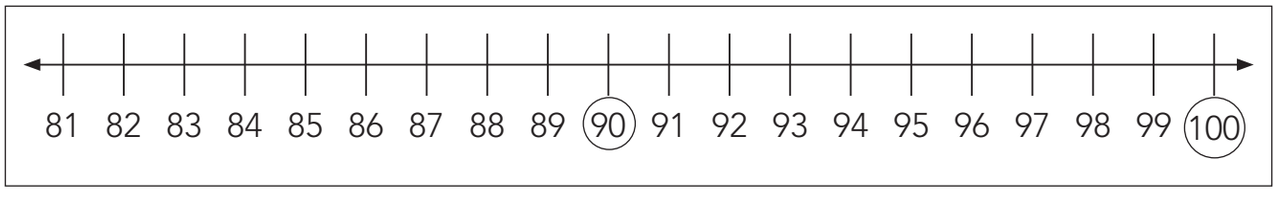
7.Imigca manani 0-160 (Isifundo 17 ne 20)

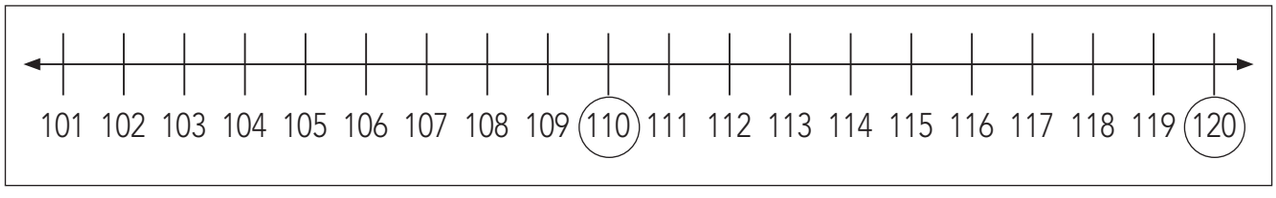


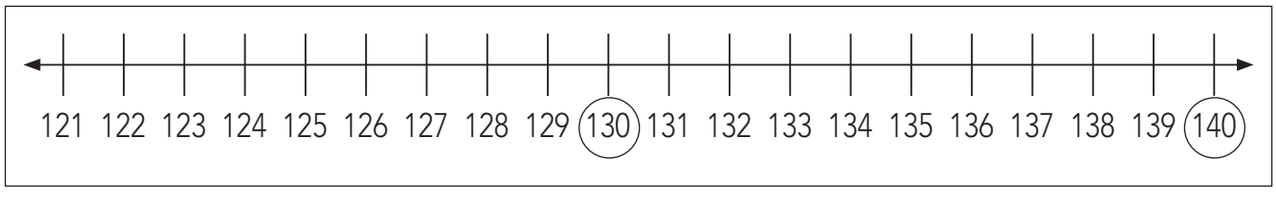


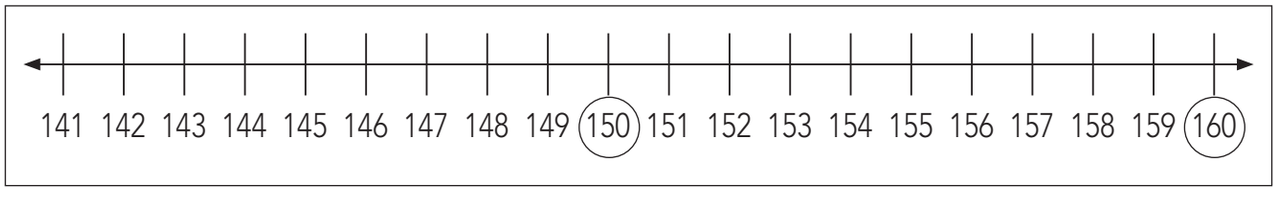












8. 2s Multiplication and division (Lesson 27)

Groups	Multiplication words	Number sentence	Sharing	Division in words
1 group of 2 is 2 	1 times 2 is 2 or 1 multiplied by 2 is 2	1 × 2 = 2	Share 2 between 2 	2 divided by 2 = 1
2 groups of 2 is 4 	2 times 2 is 4 or 2 multiplied by 2 is 4	2 × 2 = 4	Share 4 between 2 	4 divided by 2 = 2
3 groups of 2 is 6	3 times 2 is 6 or 3 multiplied by 2 is 6	3 × 2 = 6	Share 6 between 2 	6 divided by 2 = 3
4 groups of 2 is 8	4 times 2 is 8 or 4 multiplied by 2 is 8	4 × 2 = 8	Share 8 between 2 (Each gets 4)	8 divided by 2 = 4
5 groups of 2 is 10	5 times 2 is 10 or 5 multiplied by 2 is 10	5 × 2 = 10	Share 10 between 2 (Each gets 5)	10 divided by 2 = 5
6 groups of 2 is 12	6 times 2 is 12 or 6 multiplied by 2 is 12	6 × 2 = 12	Share 12 between 2 (Each gets 6)	12 divided by 2 = 6
7 groups of 2 is 14	7 times 2 is 14 or 7 multiplied by 2 is 14	7 × 2 = 14	Share 14 between 2 (Each gets 7)	14 divided by 2 = 7
8 groups of 2 is 16	8 times 2 is 16 or 8 multiplied by 2 is 16	8 × 2 = 16	Share 16 between 2 (Each gets 8)	16 divided by 2 = 8
9 groups of 2 is 18	9 times 2 is 18 or 9 multiplied by 2 is 18	9 × 2 = 18	Share 18 between 2 (Each gets 9)	18 divided by 2 = 9
10 groups of 2 is 20	10 times 2 is 20 or 10 multiplied by 2 is 20	10 × 2 = 20	Share 20 between 2 (Each gets 10)	20 divided by 2 = 10

8. 2s Uphindaphindo nolwahlulo ngezi-2 (Isifundo 27)

Amaqela	Amagama ophindaphindo	Isivakalisi samanani	Ukwabelana	Ukwahlula ngamagama
iqela eli-1 lezi-2 sisi- 2 	isi-1 esiphinda phindwe ka-2 sisi-2 okanye isinye esiphindaphindwe ngesi -2 sisi-2	1 × 2 = 2	Yaba isi-2 phakathi kwaba-2 	isi-2 esahlulwe ngesi-2 =1
amaqela ama-2 ezi-2 sisi-4 	isi-2 esiphindaphindwe ka-2 sisi-4 okanye isi-2 esiphindaphindwe ngesi-2 sisi-4	2 × 2 = 4	Yaba isi-4 phakathi kwaba-2 	isi-4 esahlulwe ngesi-2 =2
amaqela ama-3 ezi-2 sisi-6	isi-3 esiphindaphindwe ka-2 sisi-6 okanye isi-3 esiphindaphindwe ngesi-2 sisi-6	3 × 2 = 6	Yaba isi-6 phakathi kwaba-2 	isi-6 esahlulwe ngesi-2 =3
amaqela amane ezi-2 sisi-8	isi-4 esiphindaphindwe ka-2 sisi-8 okanye isi-4 esiphindaphindwe ngesi-2 sisi-8	4 × 2 = 8	Yaba isi-8 phakathi kwaba-2 Ufumana isi-4 ngamnye	isi-8 esahlulwe ngesi-2 = 4
amaqela amahlanu ezi-2 li-10	isi-5 esiphindaphindwe ka-2 li-10 okanye isi-5 esiphindaphindwe ngesi-2 li-10	5 × 2 = 10	Yaba i-10 phakathi kwaba-2 Ufumana isi-5 ngamnye	i-10 elahlulwe ngesi-2 = 5
amaqela ama-6 ezi-2 li-12	isi-6 esiphindaphindwe ka-2 li-12 okanye isi-6 esiphindaphindwe ngesi-2 li-12	6 × 2 = 12	Yaba i-12 phakathi kwaba-2 Ufumana isi-6 ngamnye	i-12 elahlulwe ngesi-2 = 6
amaqela asixhenxe ezi-2 li-14	isi-7 esiphindaphindwe ka-2 li-14 okanye isi-7 esiphindaphindwe ngesi-2 li-1	7 × 2 = 14	Yaba i-14 phakathi kwaba-2 Ufumana isi-7 ngamnye	i-14 elahlulwe ngesi-2 = 7
amaqela asi-8 ezi-2 li-16	isi-8 esiphindaphindwe ka-2 li-16 okanye isi-8 esiphindaphindwe ngesi-2 li-16	8 × 2 = 16	Yaba i-16 phakathi kwaba-2 Ufumana isi-8 ngamnye	i-16 elahlulwe ngesi-2 = 8
amaqela ali-9 ezi-2 li-18	isi-9 esiphindaphindwe ka-2 li-18 okanye isi-9 esiphindaphindwe ngesi-2 li-18	9 × 2 = 18	Yaba i-18 phakathi kwaba-2 Ufumana isithoba ngamnye	i-18 elahlulwe ngesi-2 = 9
amaqela ali-10 ezi-2 ngama-20	i-10 eliphindaphindwe ka-2 ngama-20 okanye i-10 eliphindaphindwe ngesi-2 ngama-20	10 × 2 = 20	Yaba ama-20 phakathi kwaba-2 Ufumana ishumi ngamnye	ama-20 ohlulwe ngesi-2 = 10

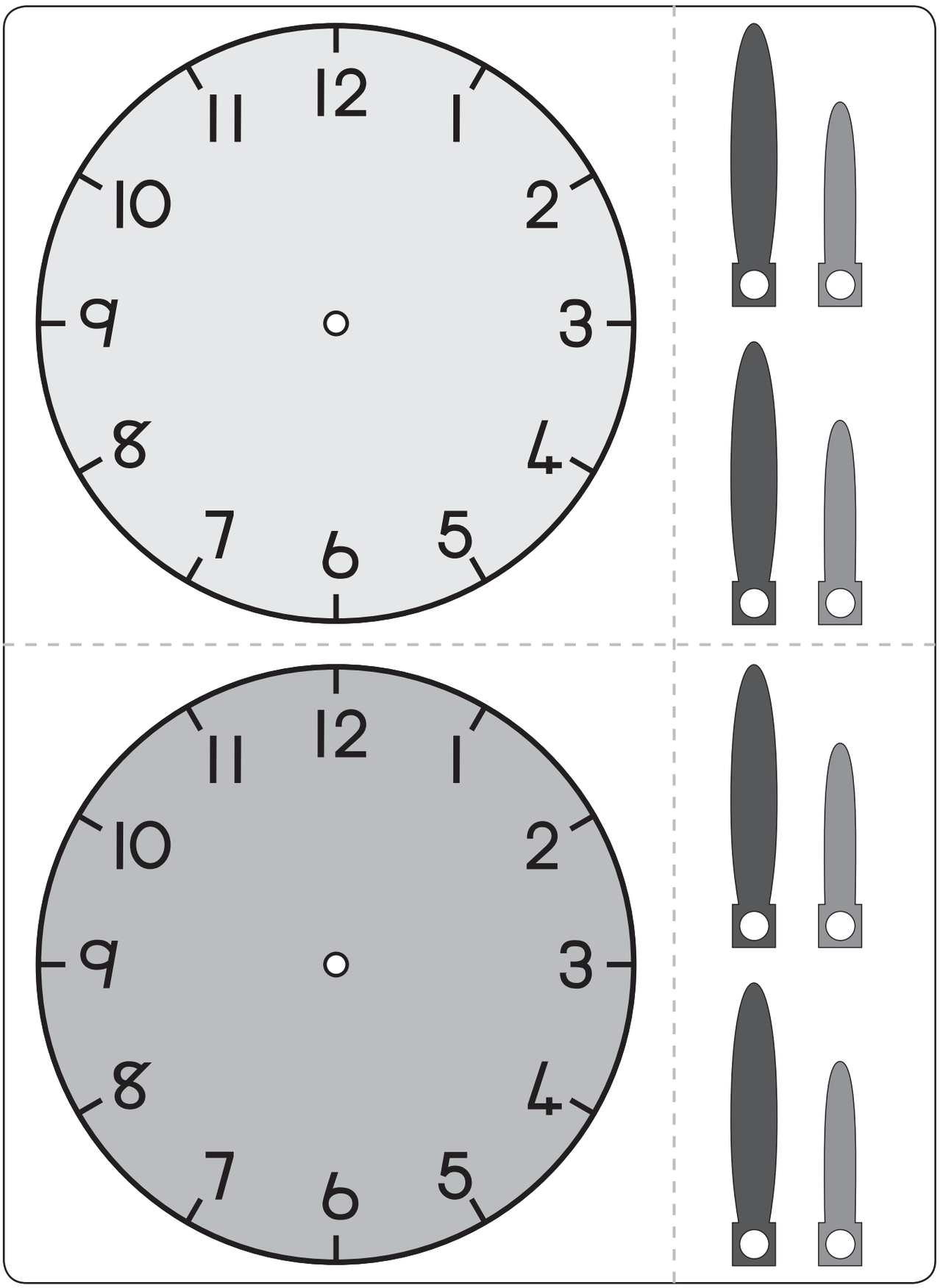
9. 5s Multiplication and division (Lesson 28)

Groups	Multiplication words	Number sentence	Sharing	Division in words
1 group of 5 is 5 ■ ■ ■ ■ ■	1 times 5 is 5 or 1 multiplied by 5 is 5	1 × 5 = 5	Share 5 between 5 ■ ■ ■ ■ ■ ☺☺☺☺☺	5 divided by 5 = 1
2 groups of 5 is 10 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	2 times 5 is 10 or 2 multiplied by 5 is 10	2 × 5 = 10	Share 10 between 2 ■ ■ ■ ■ ■ ☺☺☺☺☺	10 divided by 5 = 2
3 groups of 5 is 15	3 times 5 is 15 or 3 multiplied by 5 is 15	3 × 5 = 15	Share 15 between 5 (Each gets 3)	15 divided by 5 = 3
4 groups of 5 is 20	4 times 5 is 20 or 4 multiplied by 5 is 20	4 × 5 = 20	Share 20 between 5 (Each gets 4)	20 divided by 5 = 4
5 groups of 5 is 25	5 times 5 is 25 or 5 multiplied by 5 is 25	5 × 5 = 25	Share 25 between 5 (Each gets 5)	25 divided by 5 = 5
6 groups of 5 is 30	6 times 5 is 30 or 6 multiplied by 5 is 30	6 × 5 = 30	Share 30 between 5 (Each gets 6)	30 divided by 5 = 6
7 groups of 5 is 35	7 times 5 is 35 or 7 multiplied by 5 is 35	7 × 5 = 35	Share 35 between 5 (Each gets 7)	35 divided by 5 = 7
8 groups of 5 is 40	8 times 5 is 40 or 8 multiplied by 5 is 40	8 × 5 = 40	Share 40 between 5 (Each gets 8)	40 divided by 5 = 8
9 groups of 5 is 45	9 times 5 is 45 or 9 multiplied by 5 is 45	9 × 5 = 45	Share 45 between 5 (Each gets 9)	45 divided by 5 = 9
10 groups of 5 is 50	10 times 5 is 50 or 10 multiplied by 5 is 50	10 × 5 = 50	Share 50 between 5 (Each gets 10)	50 divided by 5 = 10

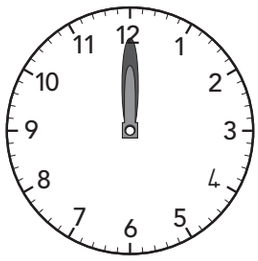
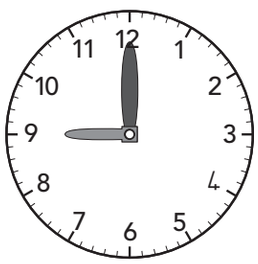
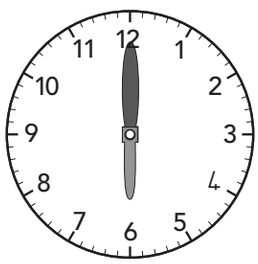
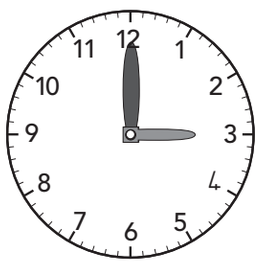
9. 5sUphindaphindo nolwahlulo ngezi-5 (Isifundo 28)

Amaqela	Amagama ophindaphindo	Isivakalisi samanani	Ukwabelana	Ukwahlula ngamagama
iqela elinye lesi-5 sisi-5 ■ ■ ■ ■ ■	isi-1 esiphindaphindwe ka-5 sisi-5 okanye isi-1 esiphindaphindwe ngesi-5 sisi-5	1 × 5 = 5	Yaba isi-5 phakathi kwaba-5 ■ ■ ■ ■ ■ ☺☺☺☺☺	isi-5 esahlulwe ngesi-5 =1
amaqela ama-2 ezi-5 li-10 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■	isi-2 esiphindaphindwe ka-5 li-10 okanye isi-2 esiphindaphindwe ngesi-5 li-10	2 × 5 = 10	Yaba i-10 phakathi kwaba-5 ■ ■ ■ ■ ■ ■ ■ ■ ■ ■ ☺☺☺☺☺	i-10 elahlulwe ngesi-5 =2
amaqela ama-3 ezi-5 li-15	isi-3 esiphindaphindwe ka-5 li-15 okanye isi-3 esiphindaphindwe ngesi-5 li-15	3 × 5 = 15	Yaba i-15 phakathi kwaba-5 Ufumana isi-3 ngamnye	i-15 elahlulwe ngesi-5 =3
amaqela ama-4 ezi-5 ngama-20	isi-4 esiphindaphindwe ka-5 ngama-20 okanye isi-4 esiphindaphindwe ngesi-5 ngama-20	4 × 5 = 20	Yaba ama-25 phakathi kwaba-5 Ufumana isi-5 ngamnye	ama-20 awohlulwe ngesi-5 =4
amaqela ama-5 ezi-5 ngama-25	isi-5 esiphindaphindwe ka-5 ngama-25 okanye isi-5 esiphindaphindwe ngesi-5 ngama-25	5 × 5 = 25	Yaba ama-30 phakathi kwaba-5 Ufumana isi-5 ngamnye	ama-25 awohlulwe ngesi-5 =5
amaqela ama-6 ezi-5 ngama-30	isi-6 esiphindaphindwe ka-5 ngama-30 okanye isi-6 esiphindaphindwe ngesi-5 ngama-30	6 × 5 = 30	Yaba ama-30 phakathi kwaba-5 Ufumana isi-6 ngamnye	ama-30 awohlulwe ngesi-5 =6
amaqela asi -7 ezi-5 ngama-35	isi-7 esiphindaphindwe ka-5 ngama-35 okanye isi-7 esiphindaphindwe ngesi-5 ngama-35	7 × 5 = 35	Yaba ama-35 phakathi kwaba-5 Ufumana isi-7 ngamnye	ama-35 awohlulwe ngesi-5 =7
amaqela asi-8 ezi-5 ngama-40	isi-8 esiphindaphindwe ka-5 ngama-40 okanye isi-8 esiphindaphindwe ngesi-5 ngama-40	8 × 5 = 40	Yaba ama-40 phakathi kwaba-5 Ufumana isi-8 ngamnye	ama-40 awohlulwe ngesi-5 =8
amaqela ali-9 ezi-5 ngama-45	isi-9 esiphindaphindwe ka-5 ngama-45 okanye isi-9 esiphindaphindwe ngesi-5 ngama-45	9 × 5 = 45	Yaba ama-45 phakathi kwaba-5 Ufumana isi-9 ngamnye	ama-45 awohlulwe ngesi-5 =9
amaqela ali-10 ezi-5 ngama-50	i-10 eliphindaphindwe ka-5 ngama-50 okanye i-10 eliphindaphindwe ngesi-5 ngama-45	10 × 5 = 50	Yaba ama-50 phakathi kwaba-5 Ufumana i-10 ngamnye	ama-50 awohlulwe ngesi-5 =10

10 Iwotshi yamasiba (Isifundo 39, 40)



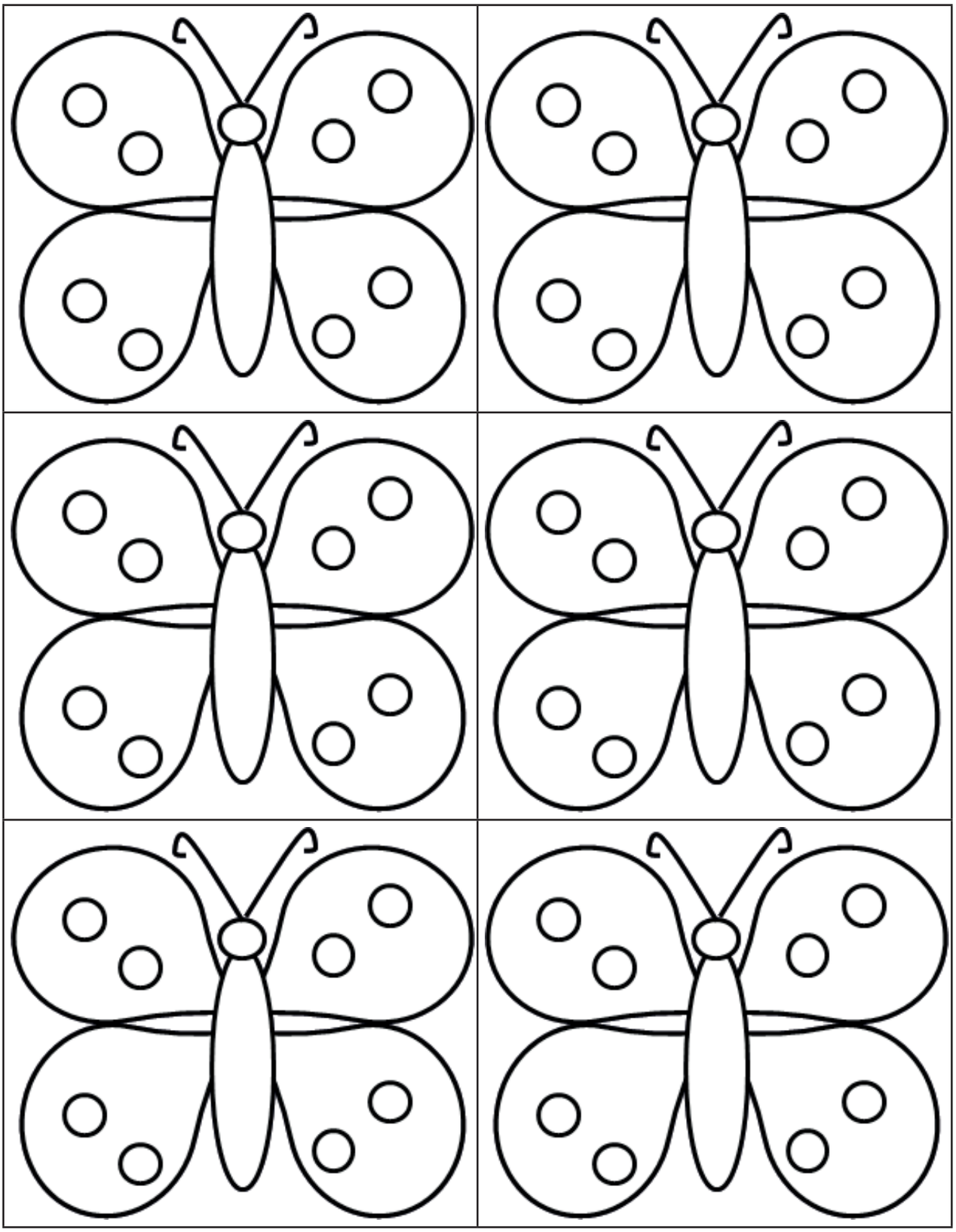
11. Amakhadi ewotshi (Isifundo 39)

intsimbi yoku-2 entloko 	intsimbi yoku-12 entloko 	intsimbi yoku-4 entloko 
intsimbi yoku-7 entloko 	intsimbi yoku-10 entloko 	intsimbi yoku-1 entloko 
intsimbi yoku-9 entloko 	intsimbi yoku-6 entloko 	intsimbi yoku-3 entloko 
intsimbi yoku-11 entloko 	intsimbi yoku-8 entloko 	intsimbi yoku-5 entloko 

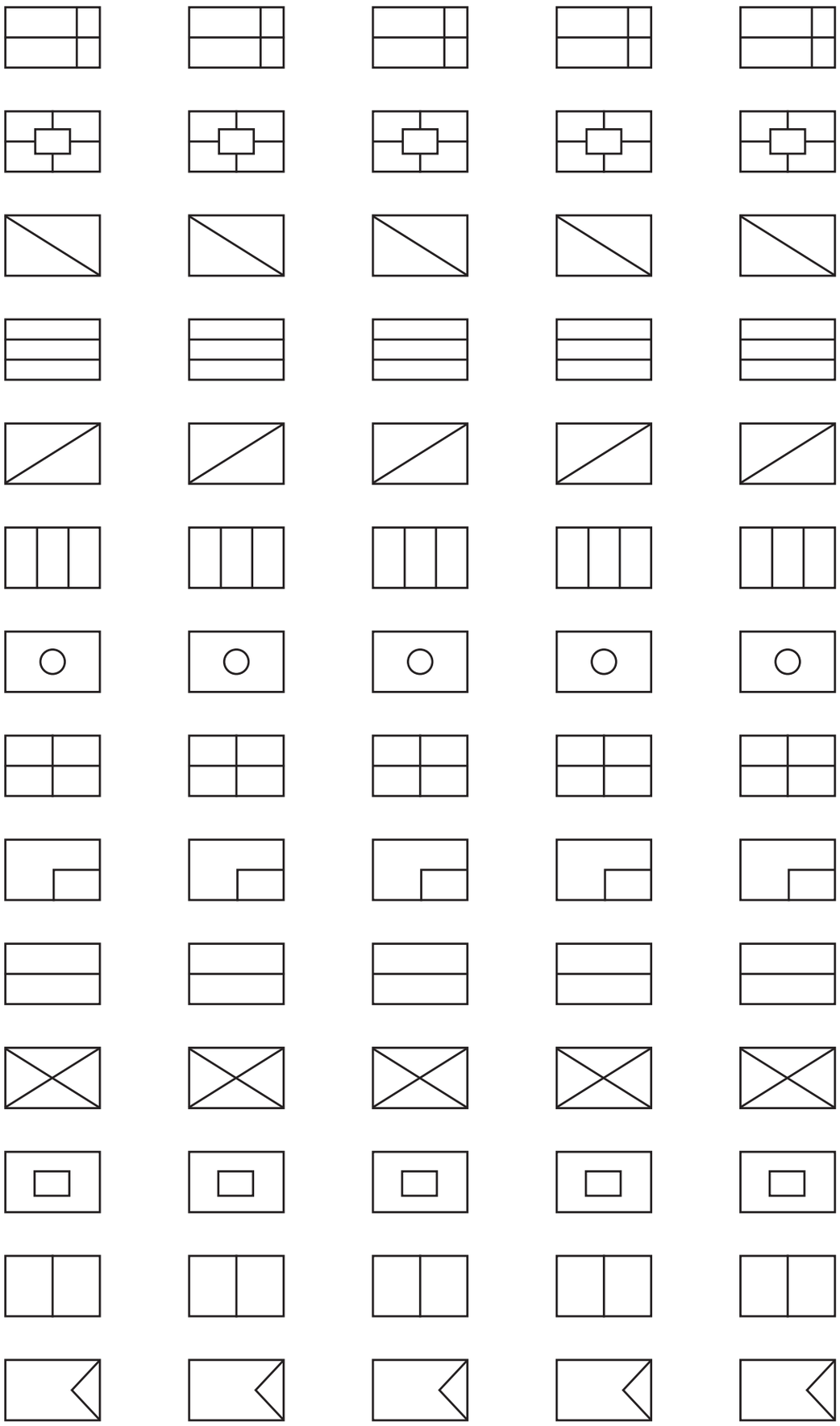
12. limilo ezixutyiweyo (Isifundo 29)

13. Iimilo ezisikiweyo (**Isifundo 31, 39 nesama-40**)

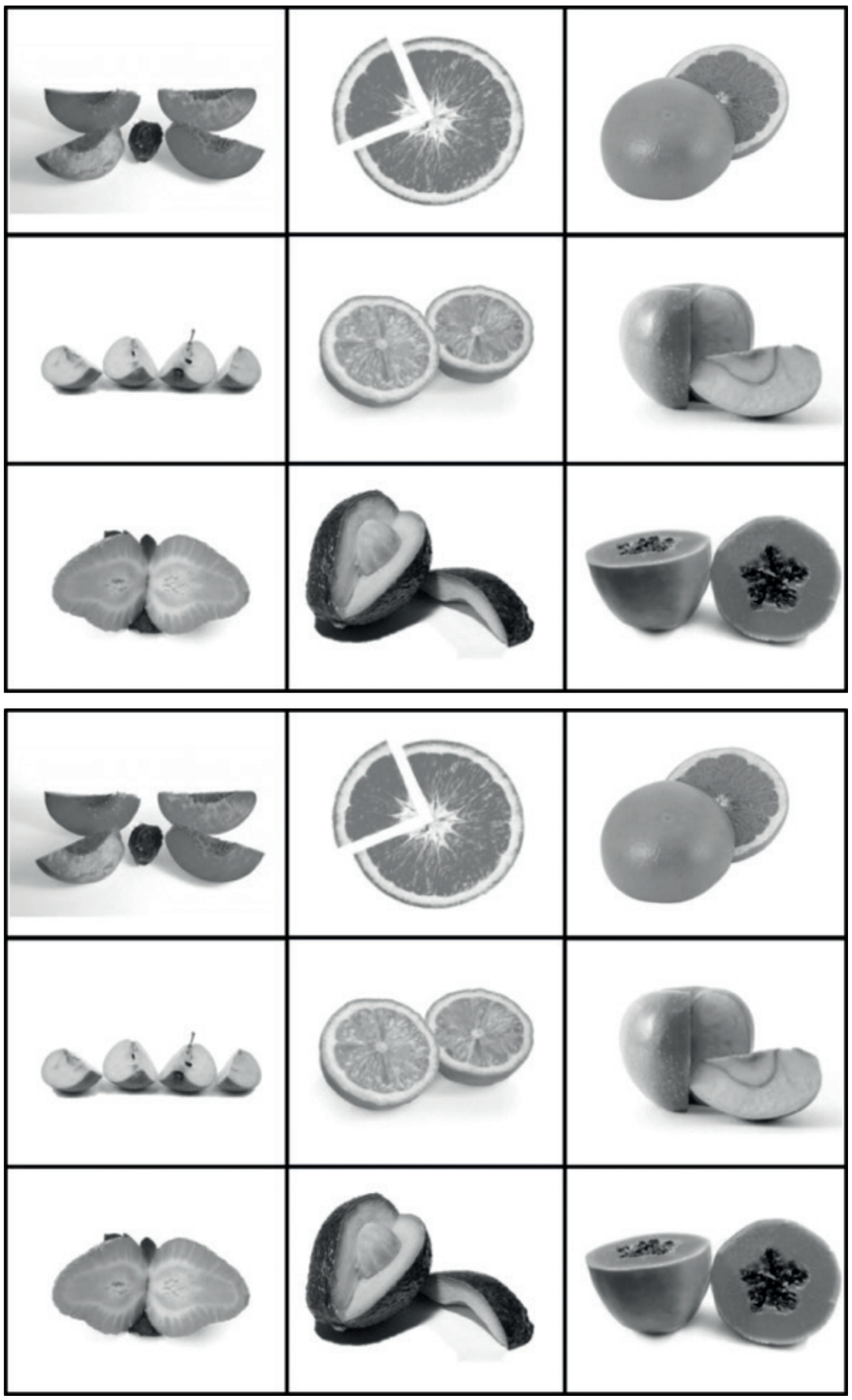
14. Umfanekiso webhabhathane - sikela umfundi ngamnye ube mnye (Isifundo 32)



15. Imicu yeemilo- sikela umfundi ngamnye ubemnye (Isifundo 33)



16. Amakhadi emifanekiso yeziqhamo- yenza amakhadi amabini kweli khasi (Isifundo 35)



Mental Mathematics Challenge Cards: Bilingual Version

Each term there will be a set of eight mental mathematics challenge cards. If you make them into cards and collect them over the course of the year, you will have a set of one card per teaching week for a year.

Use of the mental mathematics challenge cards

Once a week learners should do mental mathematics in written form, so that there is some record of your daily mental mathematics activities. You can use the mental **mathematics challenge cards** for this purpose.

Learners should not use concrete material to work out the answers in mental mathematics. If learners need to, let them use their fingers as a concrete aid during mental mathematics, but make a note of who they are, and then spend time with them during remediation to help them with the basic number and operation skills. Mental mathematics skills improve hugely from Grade 1 to Grade 3. In Grade 1 learners might only manage five questions, especially when they have to write the answers, but by Grade 3 learners should manage ten questions with written answers easily

Maths Challenge Card 1

Addition number range 0–10

Ikhadi Lezibalo ezingumceli-mngeni 1

Ukudityaniswa kwamanani ukusuka ku-0-10

1. 3 + 2 =
2. 5 + 1 =
3. 8 + 2 =
4. 6 + 1 =
5. 5 + 4 =
6. 4 + 4 =
7. 7 + 3 =
8. 10 + 10 =
9. 6 + 3 =
10. 9 + 1 =

Maths Challenge Card 2

Subtraction number range 0–10

Ikhadi Lezibalo ezingumceli-mngeni 2

Ukuthatyathwa kwamanani ukusuka ku-0-10

1. 4 – 1 =
2. 9 – 3 =
3. 6 – 2 =
4. 7 – 6 =
5. 8 – 6 =
6. 5 – 1 =
7. 9 – 5 =
8. 2 – 1 =
9. 7 – 3 =
10. 10 – 10 =

Maths Challenge Card 3

What is 2 more than:

Ikhadi Lezibalo ezingumceli-mngeni 3

Leliphi inani elingaphezulu ngesibini kunesi:

1. 8
2. 7
3. 6
4. 4
5. 5

What is 2 less than:
Buthini ubuncinane ngesi-2 kunesi-:

6. 10
7. 7
8. 8
9. 6
10. 4

Maths Challenge Card 4

What is 3 more than:

Ikhadi Lezibalo ezingumceli-mngeni 4

Leliphi inani elingaphezulu ngesi-3 kunesi:

1. 6
2. 2
3. 4
4. 7
5. 5

What is 3 less than:
Buthini ubuncinane ngesi-3 kunesi-:

6. 7
7. 5
8. 6
9. 10
10. 3

Maths Challenge Card 1: Answers

Addition number range 0–10

Ikhadi Lezibalo ezingumceli-mngeni 1: Iimpendulo

Ukudityaniswa kwamanani ukusuka ku-0-10

1. 5
2. 6
3. 10
4. 7
5. 9
6. 8
7. 10
8. 20
9. 9
10. 10

Maths Challenge Card 2: Answers

Subtraction number range 0–10

Ikhadi Lezibalo ezingumceli-mngeni 2: Iimpendulo

Ukuthatyathwa kwamanani ukusuka ku-0-10

1. 3
2. 6
3. 4
4. 1
5. 2
6. 4
7. 4
8. 1
9. 4
10. 0

Maths Challenge Card 3: Answers

Ikhadi Lezibalo ezingumceli-mngeni 3: Iimpendulo

1. 10
2. 9
3. 8
4. 6
5. 7
6. 8
7. 5
8. 6
9. 4
10. 2

Maths Challenge Card 4: Answers

Ikhadi Lezibalo ezingumceli-mngeni 4: Iimpendulo

1. 9
2. 5
3. 7
4. 10
5. 8
6. 4
7. 2
8. 3
9. 7
10. 0

Maths Challenge Card 5

What is 4 more than:

Ikhadi Lezibalo ezingumceli-mngeni 5

Leliphi inani elikhulu ngesi-4 kunesi-:

1. 5
2. 4
3. 2
4. 3
5. 6

What is 4 less than:
Leliphi inani elincinane ngesi-4 kune-:

6. 6
7. 10
8. 4
9. 7
10. 5

Maths Challenge Card 6

What is 10 more than:

Ikhadi Lezibalo ezingumceli-mngeni 6

Leliphi inani elikhulu nge-10 kunesi-:

1. 20
2. 10
3. 40
4. 50
5. 70

What is 5 less than:
Leliphi inani elincinane ngesi-5 kune-:

6. 10
7. 15
8. 20
9. 50
10. 45

Maths Challenge Card 7

Double

Ikhadi Lezibalo ezingumceli-mngeni 7

Phinda kabini

1. 8
2. 9
3. 6
4. 10
5. 7

Halve
Yahlula phakathi

6. 10
7. 8
8. 2
9. 6
10. 4

Maths Challenge Card 8

Ikhadi Lezibalo ezingumceli-mngeni 8

1. 0, 2, 4, ___, ___, ___
2. 40, 50, 60, ___, ___, ___
3. 5,10, 15, ___, ___, ___
4. 3, 6, 9, ___, ___, ___
5. 60, 50, 40, __, ___, ___
6. 0, 4, 8, ___, ___, ___
7. 28, 24, 20, ___, ___, ___
8. 27, 24, 21, ___, ___, ___
9. 22, 20, 18, ___, ___, ___
10. 25, 20, 15, ___, ___, ___

Maths Challenge Card 5: Answers

4 more than or 4 less than

Ikhadi Lezibalo ezingumceli-mngeni 5: Iimpendulo

Inani elincinane ngesi-4 okanye elikhulu ngesi-4

1. 9
2. 8
3. 6
4. 7
5. 10
6. 2
7. 6
8. 0
9. 3
10. 1

Maths Challenge Card 6: Answers

Add 10 and subtract 5

Ikhadi Lezibalo ezingumceli-mngeni 6: Iimpendulo

Dibanisa i-10 ze uthabathe isi-5

1. 30
2. 20
3. 50
4. 60
5. 80
6. 5
7. 10
8. 15
9. 45
10. 40

Maths Challenge Card 7: Answers

Ikhadi Lezibalo ezingumceli-mngeni 7: Iimpendulo

1. 16
2. 18
3. 12
4. 20
5. 14
6. 5
7. 4
8. 1
9. 3
10. 2

Maths Challenge Card 8: Answers

Ikhadi Lezibalo ezingumceli-mngeni 8: Iimpendulo

1. 6, 8, 10
2. 70, 80, 90
3. 20, 25, 30
4. 12, 15, 18
5. 30, 20, 10
6. 12, 16, 20
7. 16, 12, 8
8. 18, 15, 12
9. 16, 14, 12
10. 10, 5, 0

Enrichment Activity Cards: English Version

Each term a set of new enrichment cards will be provided. You should retain this set, as they will not be reproduced each term.

Use of the enrichment activity cards

Optional as required.

These cards include activities that you can use for enrichment opportunities for learners who have completed the lesson activities ahead of the rest of the class. Learners should work on these cards independently or with their peers who have also completed the classwork. You may need to explain some of the activities to the learners who use them. You should remind them to ask you questions about any of the enrichment activities that they are doing, so that you can guide them as necessary.

You should photocopy the enrichment cards, paste them onto cardboard and laminate them (if possible), so that they can be used as a resource, not only this year but in the future as well.

Put the cardboard laminated cards into a box in a set place in your classroom, so that learners know where to find them. These cards are for all learners and do not have to be used in a particular order. Learners should keep a record of the cards that they have completed, so that they continue to choose a new card each time they go to the box. Learners must be taught to replace the cards in numeric order in the box, so that everyone who looks for cards can easily find the one they want to use.

Enrichment Activity 2.1

Fill in the missing numbers. Each row, column and every 2 by 2 box must contain all four numbers.

		3	
	4		
		1	
	2		

Enrichment Activity 2.2

Fill in the missing numbers. Each row, column and every 2 by 2 box must contain all four numbers.

		2	
	4		
		3	
	1		

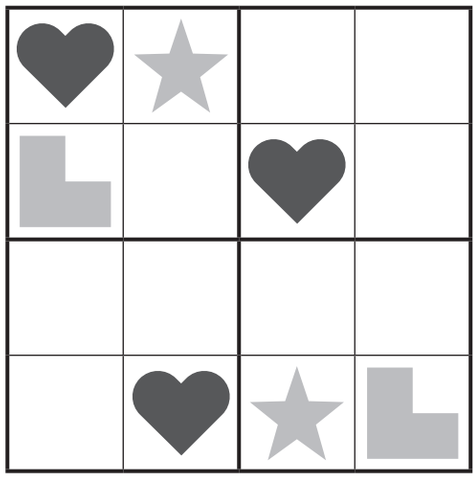
Enrichment Activity 2.3

Fill in the missing numbers. Each row, column and every 2 by 2 box must contain all four numbers.

		4	
1			
			4
	3		

Enrichment Activity 2.4

Fill in the missing Sudoku shape.



Enrichment Activity 2.1: Answers

2	1	**3**	4
3	**4**	2	1
4	3	**1**	2
1	**2**	4	3

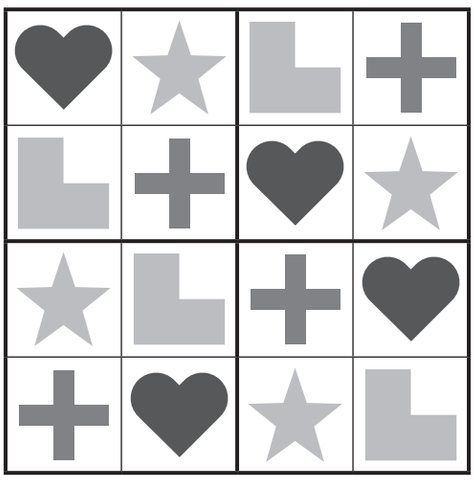
Enrichment Activity 2.2: Answers

1	3	**2**	4
2	**4**	1	3
4	2	**3**	1
3	**1**	4	2

Enrichment Activity 2.3: Answers

3	2	**4**	1
1	4	2	3
2	1	3	**4**
4	**3**	1	2

Enrichment Activity 2.4: Answers



Enrichment Activity 2.5

Using a small stone, find the path from start to end by moving along the blocks in which the value of the tens is 2.

start	21	eleven		13
7		twenty five		
	14		twenty four	19
	five	15	six	end

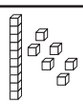
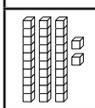
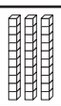
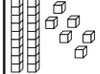
Enrichment Activity 2.6

Using a small stone, find the path from start to end by moving along the blocks in which the value of the units is 2.

end	12		twenty four	25
	twenty seven		28	
22		two		14
start	sixteen	18	nineteen	20

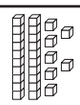
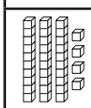
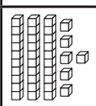
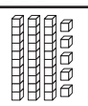
Enrichment Activity 2.7

Using a small stone, find the path from start to end by moving along the blocks in which the value of the tens is 3.

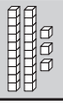
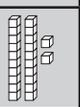
end	14	fifteen		17
	thirty four		18	
25		36	37	thirty nine
	41	twenty nine	28	start

Enrichment Activity 2.8

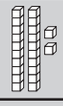
Using a small stone, find the path from start to end by moving along the blocks in which the value of the units is 3.

2	31	twenty eight		start
	thirty seven		32	
38	4		39	thirteen
end	23	three		

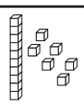
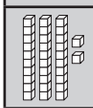
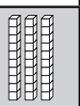
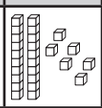
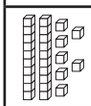
Enrichment Activity 2.5: Answers

start	21	eleven		13
7		twenty five		
	14		twenty four	19
	five	15	six	end

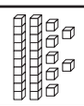
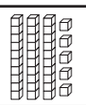
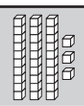
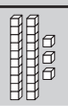
Enrichment Activity 2.6: Answers

end	12		twenty four	25
	twenty seven		28	
22		two		14
start	sixteen	18	nineteen	20

Enrichment Activity 2.7: Answers

end	14	fifteen		17
	thirty four		18	
25		36	37	thirty nine
	41	twenty nine	28	start

Enrichment Activity 2.8: Answers

2	31	twenty eight		start
	thirty seven		32	
38	4		39	thirteen
end	23	three		

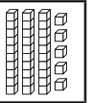
Enrichment Activity 2.9

Using a small stone, find the path from start to end by moving along the blocks in which the value of the tens is 4.

31	38	thirty three		end
	twenty one		39	44
thirty eight	45		forty three	46
start	41	twenty five		

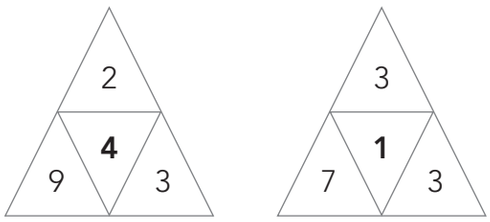
Enrichment Activity 2.10

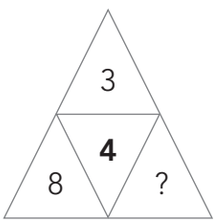
Using a small stone, find the path from start to end by moving along the blocks in which the value of the units is 4.

47	forty three	14	4	end
	thirty one		36	46
four		34	forty five	
start	48	thirty seven		forty nine

Enrichment Activity 2.11

Look at the two top triangles, then work out what number should replace the question mark in the bottom triangle.



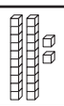
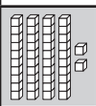
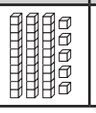
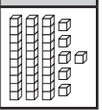


Enrichment Activity 2.12

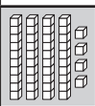
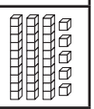
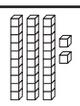
In a magazine, newspaper or advertisement find five products with a mass of 1 kg.

Paste the pictures in your maths book.

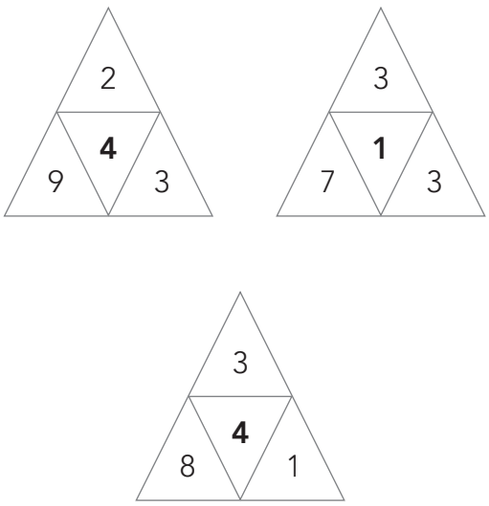
Enrichment Activity 2.9: Answers

31	38	thirty three		end
	twenty one		39	44
thirty eight	45		forty three	46
start	41	twenty five		

Enrichment Activity 2.10: Answers

47	forty three	14	4	end
	thirty one		36	46
four		34	forty five	
start	48	thirty seven		forty nine

Enrichment Activity 2.11: Answers

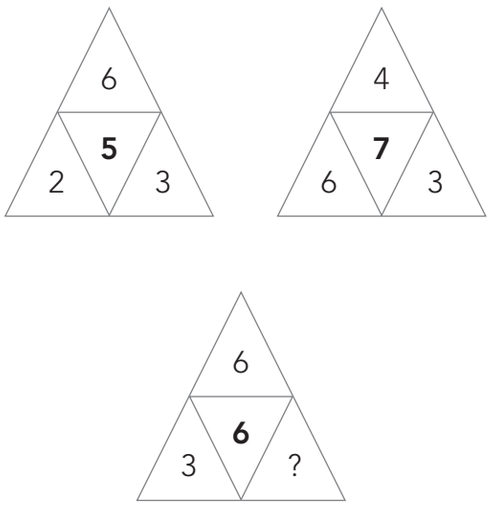


Enrichment Activity 2.12: Example

Here is an example of five products that have a mass of 1 kg each.

Enrichment Activity 2.13

Look at the two top triangles, then work out what number should replace the question mark in the bottom triangle.

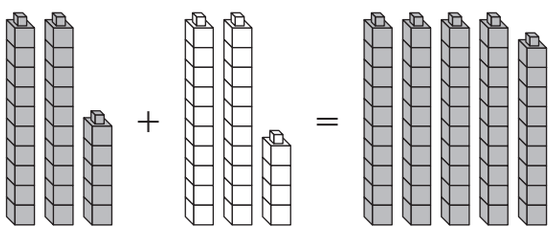


Enrichment Activity 2.14

My mother gave me 48 marbles. I lost 19 in a game. How many marbles do I have left?

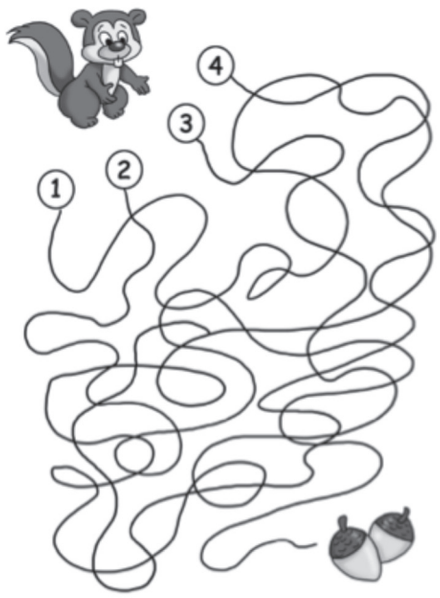
Enrichment Activity 2.15

Complete the number to number picture.

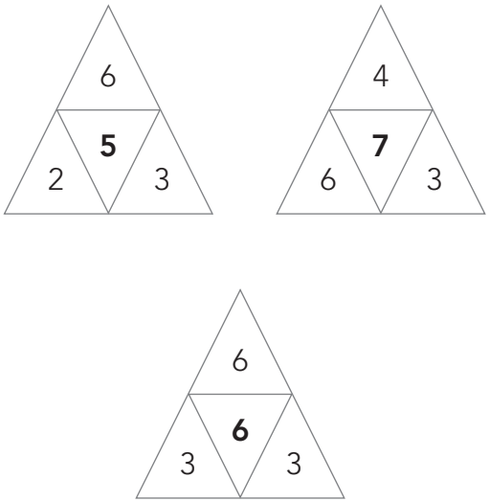


Enrichment Activity 2.16

Complete the number to number picture.



Enrichment Activity 2.13: Answers



Enrichment Activity 2.14: Answers

48 – 19 = □

48 – 19 = 29

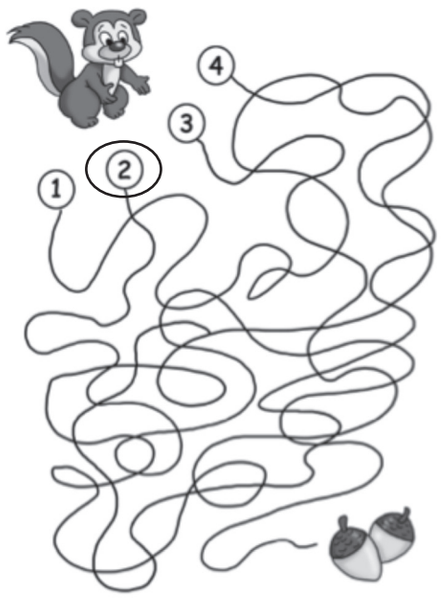
Enrichment Activity 2.15: Answer

25 + 24 = □

24 + 1 + 24 = □

Double 24 + 1 = □

Enrichment Activity 2.16: Answer



Enrichment Activity 2.17

These coins will make R1.

Are these the only combinations?

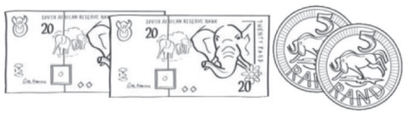
Enrichment Activity 2.18

These coins and notes will make R20.

Are these the only combinations?

Enrichment Activity 2.19

These coins and notes will make R50.



Are these the only answers?

Enrichment Activity 2.20

What will the next shape in this pattern be?

Enrichment Activity 2.17: Answers

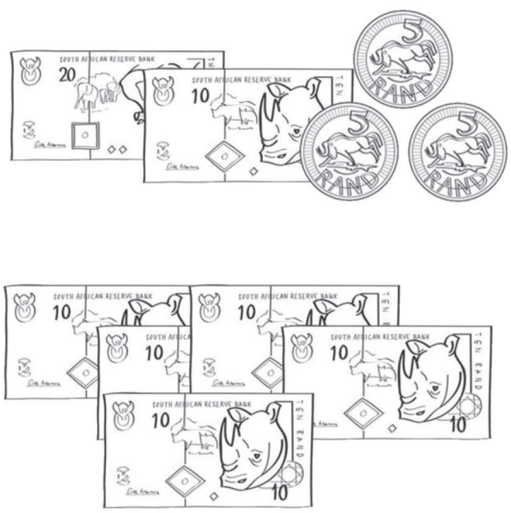
No, here are a few more combinations.

Enrichment Activity 2.18: Answers

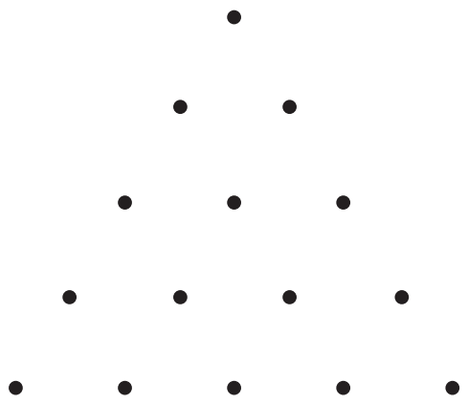
No, here are a few more combinations.

Enrichment Activity 2.19: Answers

No, here are a few more combinations.

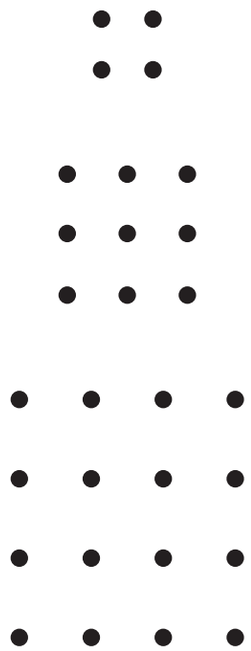


Enrichment Activity 2.20: Answers



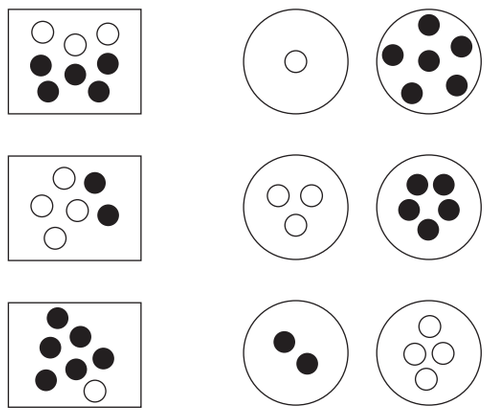
Enrichment Activity 2.21

Draw the next pattern.



Enrichment Activity 2.22

Match the sorted objects with the picture.



Enrichment Activity 2.23

Complete the table.

×	4	5	10
2			
3			
10			

Add the two greatest numbers.

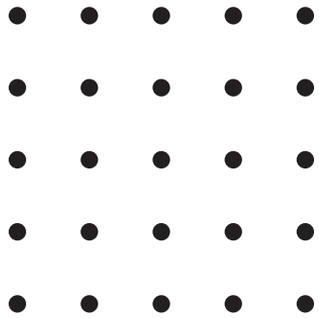
Enrichment Activity 2.24

Complete the table.

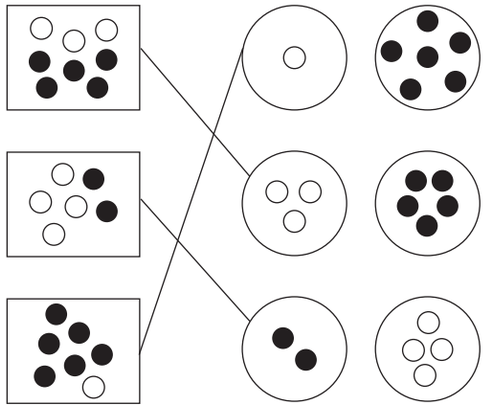
×	3	4	5
4			
5			
6			

Add the two smallest numbers.

Enrichment Activity 2.21: Answers



Enrichment Activity 2.22: Answers



Enrichment Activity 2.23: Answers

×	4	5	10
2	8	10	20
3	12	15	30
10	40	50	100

100 + 50 = 150

Enrichment Activity 2.24: Answers

×	3	4	5
4	12	16	20
5	15	20	25
6	18	24	30

12 + 15 = 27

Enrichment Activity 2.25

Complete the table.

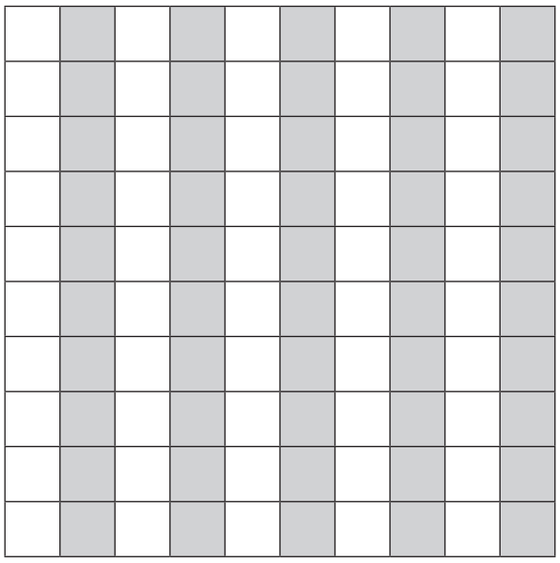
×	1	2	3
1			
2			
3			

Add all the answers.

Enrichment Activity 2.26

Write the numbers from 1–100 into the number board.

What pattern has been shaded?



Enrichment Activity 2.27

Complete the table.

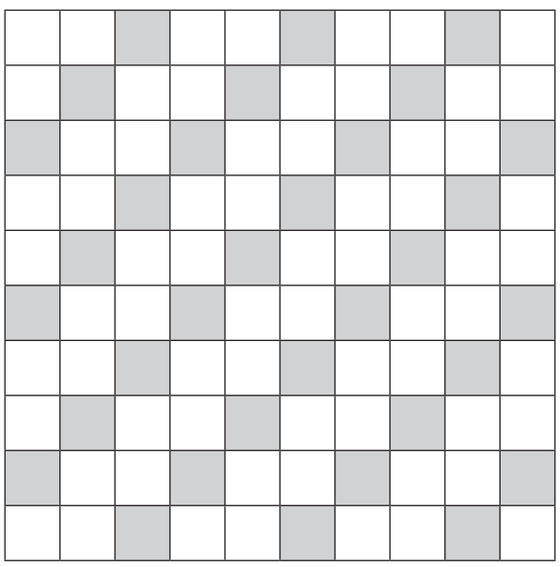
×	3	4	5
4			
5			
6			

Add the three smallest numbers.

Enrichment Activity 2.28

Write the numbers from 1–100 into the number board.

What pattern has been shaded?



Enrichment Activity 2.25: Answers

×	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9

1 + 2 + 3 + 2 + 4 + 6 + 3 + 6 + 9 = 36

Enrichment Activity 2.26: Answers

The multiples of 2 are coloured in.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Enrichment Activity 2.27: Answers

×	3	4	5
4	12	16	20
5	15	20	25
6	18	24	30

12 + 15 + 18 = 45

Enrichment Activity 2.28: Answers

The multiples of 3 are coloured in.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Enrichment Activity 2.29

Complete the table.

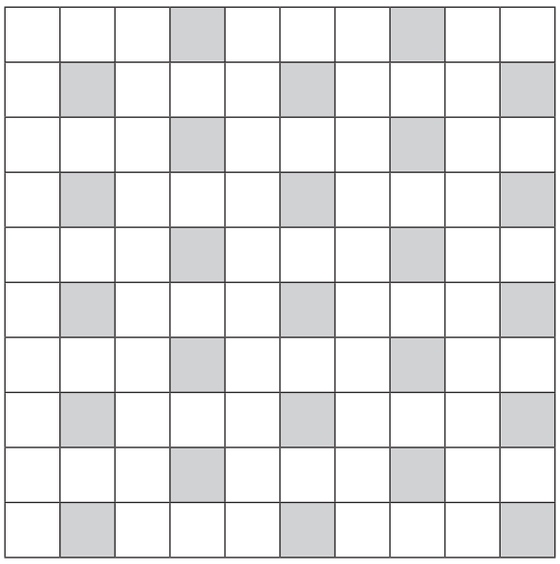
×	1	4	5
7			
8			
9			

Add the two biggest answers.

Enrichment Activity 2.30

Write the numbers from 1–100 into the number board.

What pattern has been shaded?



Enrichment Activity 2.31

Match the word with the diagram.

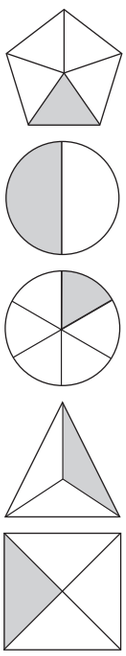
1 half

1 quarter

1 third

1 fifth

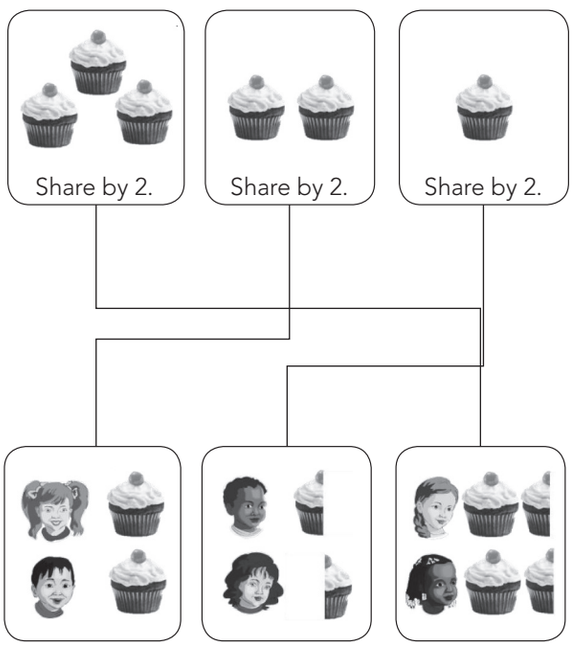
1 sixth



Where in real life will we use fractions?

Enrichment Activity 2.32

Find the path.



Write a word problem for each.

Enrichment Activity 2.29: Answers

×	1	4	5
7	7	28	35
8	8	32	40
9	9	36	45

45 + 36 = 81

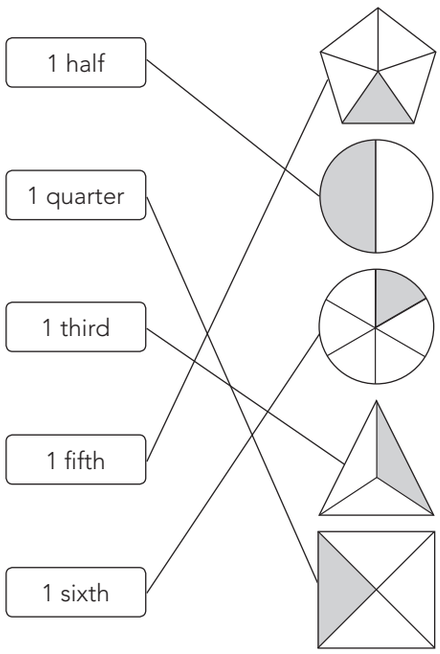
Enrichment Activity 2.30: Answers

The multiples of 4 are coloured in.

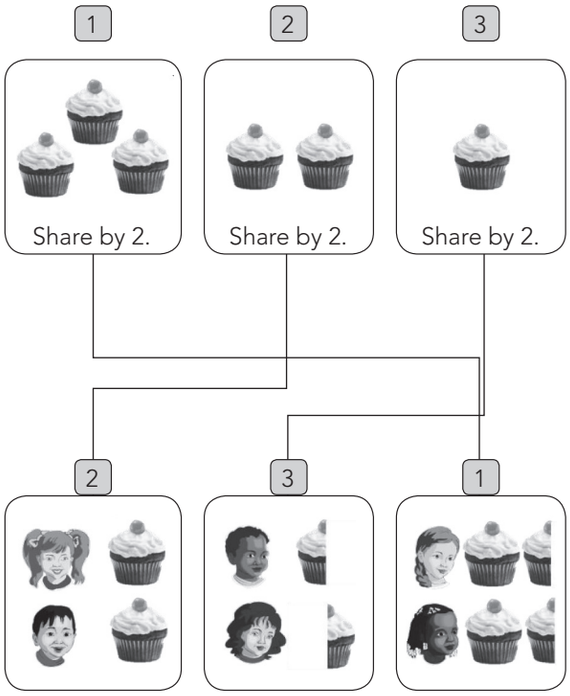
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Enrichment Activity 2.31: Answers

Match the cards.

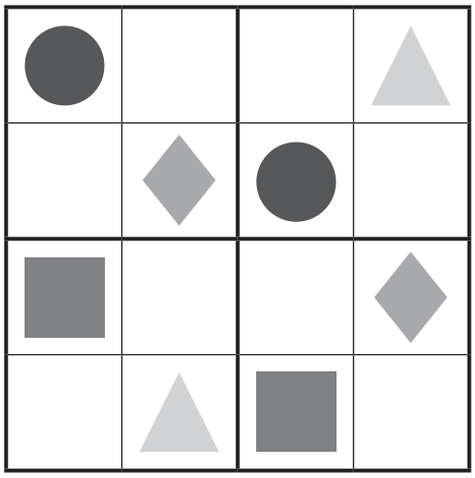


Enrichment Activity 2.32: Answers



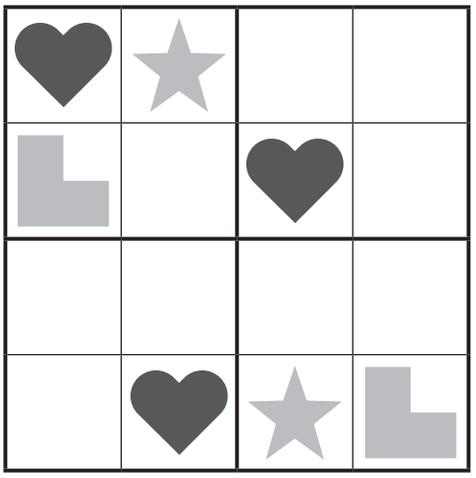
Enrichment Activity 2.33

Fill in the missing Sudoku shapes.



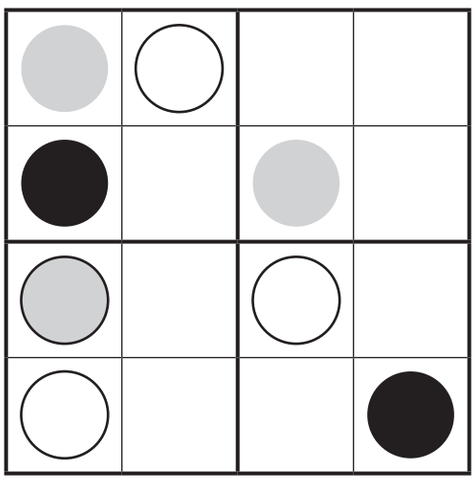
Enrichment Activity 2.34

Fill in the missing Sudoku shapes.



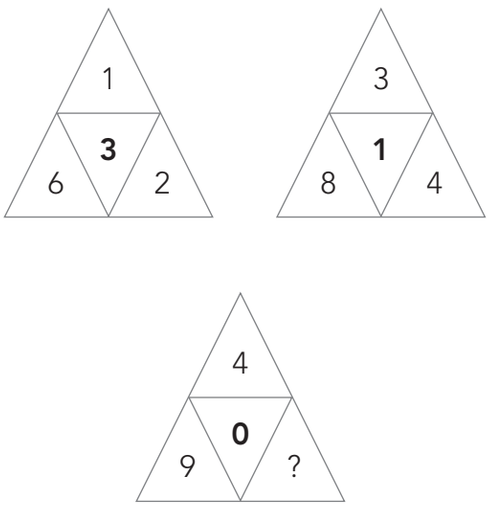
Enrichment Activity 2.35

Fill in the missing Sudoku shapes.

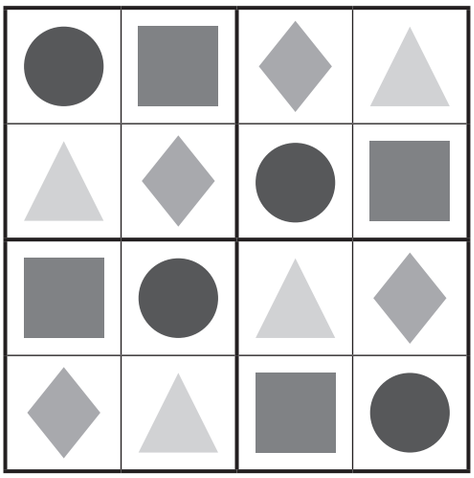


Enrichment Activity 2.36

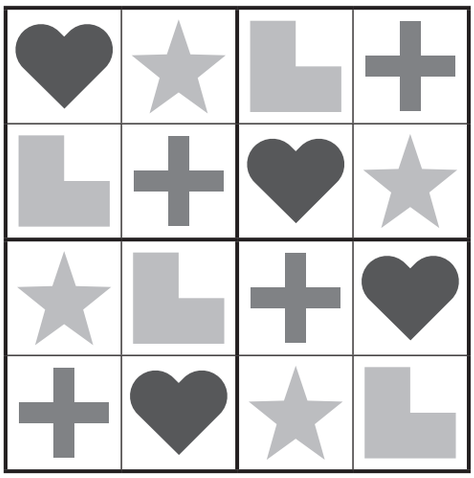
Look at the two top triangles, then work out what number should replace the question mark in the bottom triangle.



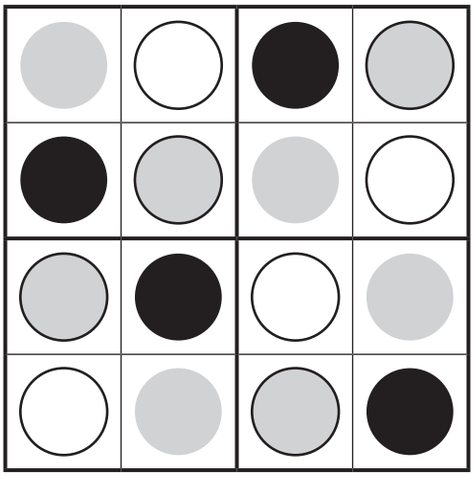
Enrichment Activity 2.33: Answers



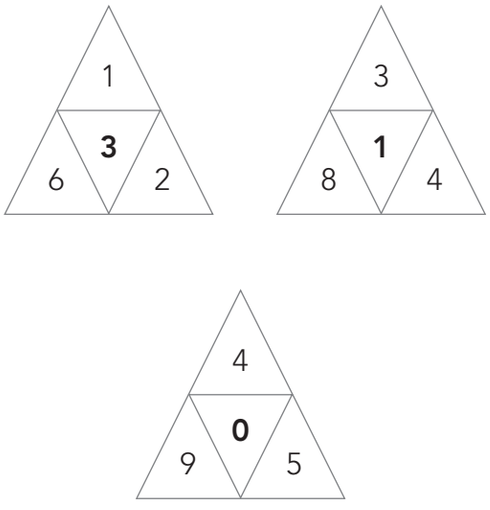
Enrichment Activity 2.34: Answers



Enrichment Activity 2.35: Answers

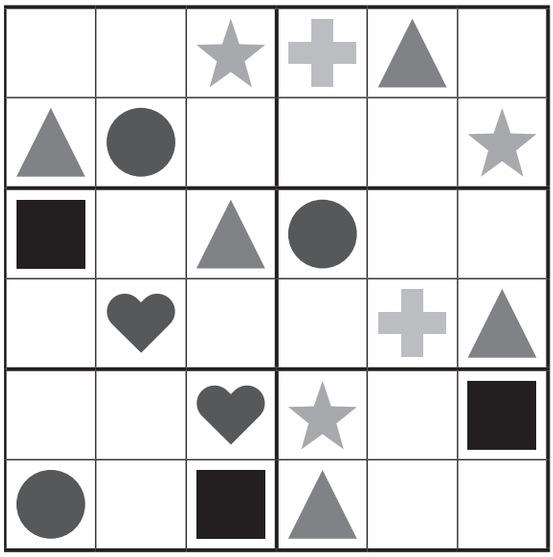


Enrichment Activity 2.36: Answers



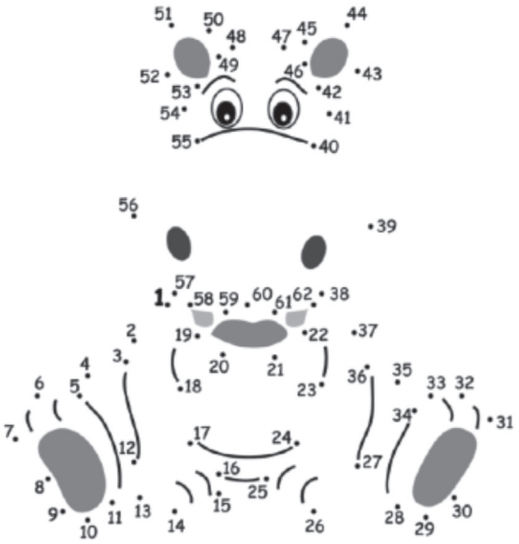
Enrichment Activity 2.37

Complete the Sudoku shape puzzle.



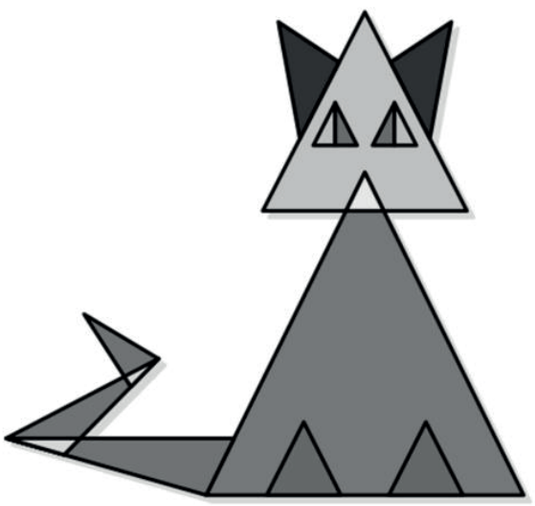
Enrichment Activity 2.38

What animal will this be?



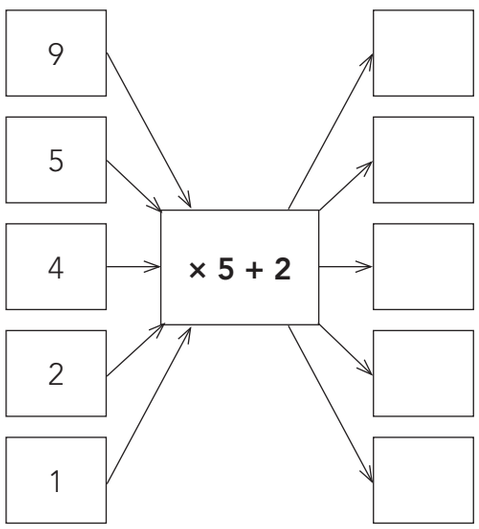
Enrichment Activity 2.39

How many different triangles can you count in this picture?

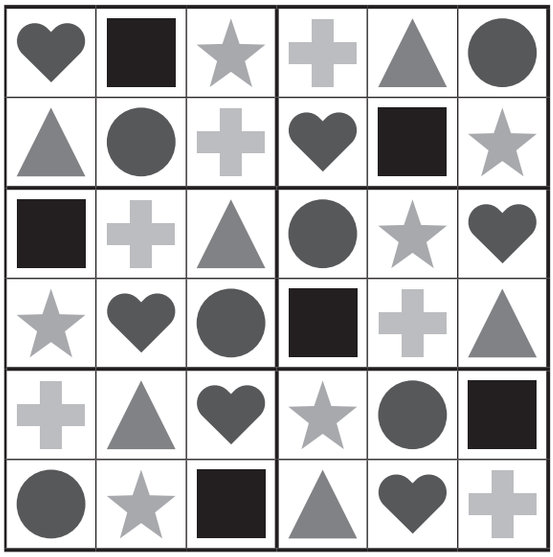


Enrichment Activity 2.40

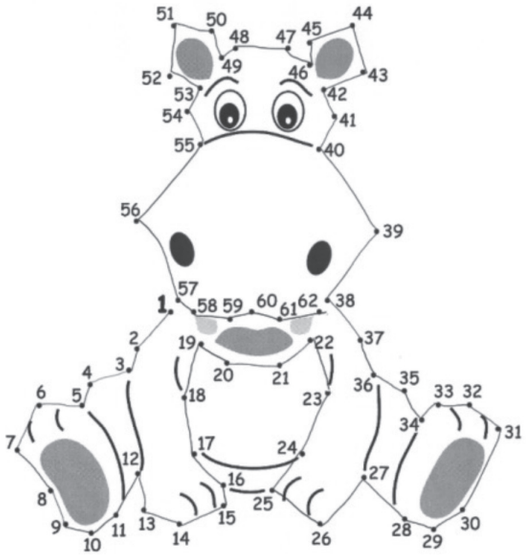
Complete the spider diagram.



Enrichment Activity 2.37: Answers

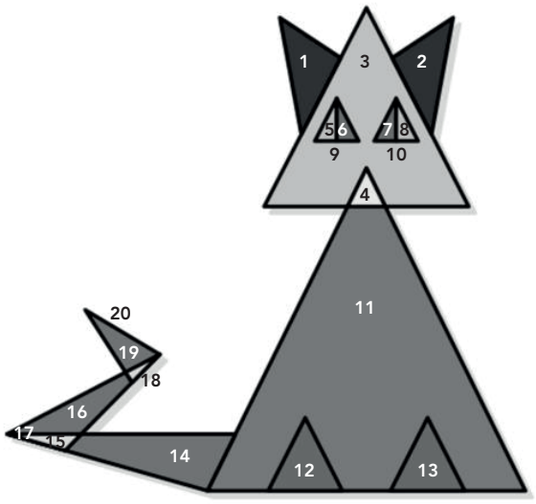


Enrichment Activity 2.38: Answers

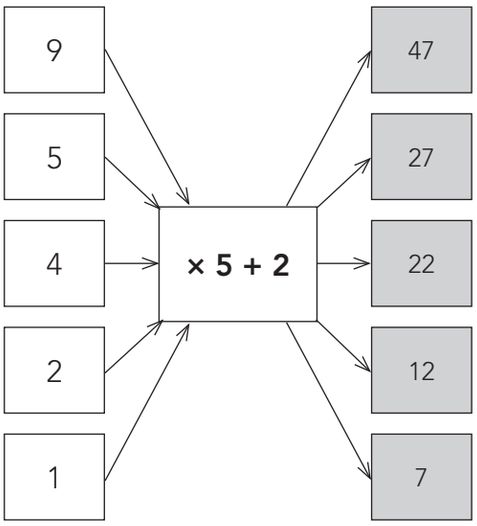


Enrichment Activity 2.39: Answer

20 triangles



Enrichment Activity 2.40: Answer



Enrichment Activity Cards: isiXhosa Version

Each term a set of new enrichment cards will be provided. You should retain this set, as they will not be reproduced each term.

Use of the enrichment activity cards

Optional as required.

These cards include activities that you can use for enrichment opportunities for learners who have completed the lesson activities ahead of the rest of the class. Learners should work on these cards independently or with their peers who have also completed the classwork. You may need to explain some of the activities to the learners who use them. You should remind them to ask you questions about any of the enrichment activities that they are doing, so that you can guide them as necessary.

You should photocopy the enrichment cards, paste them onto cardboard and laminate them (if possible), so that they can be used as a resource, not only this year but in the future as well.

Put the cardboard laminated cards into a box in a set place in your classroom, so that learners know where to find them. These cards are for all learners and do not have to be used in a particular order. Learners should keep a record of the cards that they have completed, so that they continue to choose a new card each time they go to the box. Learners must be taught to replace the cards in numeric order in the box, so that everyone who looks for cards can easily find the one they want to use.

Umsebenzi Wophuculo 2.1

Fakela amanani ashiyiweyo. Kumqolo, nekholamu nganye nebhokisi nganye yesi-2 ephindwe ngesi-2 ifanele ukuba nawo omane amanani..

		3	
	4		
		1	
	2		

Umsebenzi Wophuculo 2.2

Fakela amanani ashiyiweyo. Kumqolo, nekholamu nganye nebhokisi nganye yesi-2 ephindwe ngesi-2 ifanele ukuba nawo omane amanani..

		2	
	4		
		3	
	1		

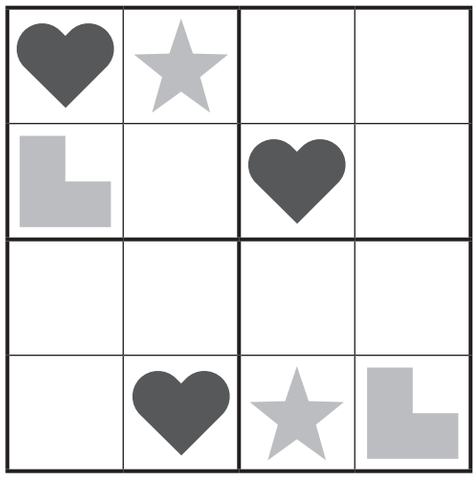
Umsebenzi Wophuculo 2.3

Fakela amanani ashiyiweyo. Kumqolo, nekholamu nganye nebhokisi nganye yesi-2 ephindwe ngesi-2 ifanele ukuba nawo omane amanani..

		4	
1			
			4
	3		

Umsebenzi Wophuculo 2.4

Fakela iimilo zeSudoku ezishiyiweyo..



Umsebenzi Wophuculo 2.1: Iimpendulo

2	1	**3**	4
3	**4**	2	1
4	3	**1**	2
1	**2**	4	3

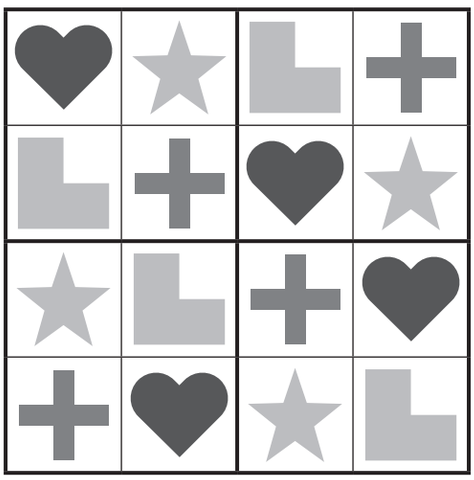
Umsebenzi Wophuculo 2.2: Iimpendulo

1	3	**2**	4
2	**4**	1	3
4	2	**3**	1
3	**1**	4	2

Umsebenzi Wophuculo 2.3: Iimpendulo

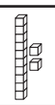
3	2	**4**	1
1	4	2	3
2	1	3	**4**
4	**3**	1	2

Umsebenzi Wophuculo 2.4: Iimpendulo



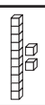
Umsebenzi Wophuculo 2.5

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lamashumi isisi-2.

qala	21	ishumi elinanye		13
7		amashumi amabini anesihlanu		
	14		amashumi amabini anesine	19
	isihlanu	15	isithan-dathu	isiphelo

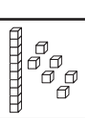
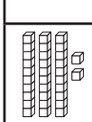
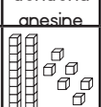
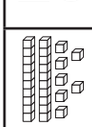
Umsebenzi Wophuculo 2.6

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lemivo isisi-2.

isiphelo	12		amashumi amabini anesine	25
	amashumi amabini anesix-henxe		28	
22		isibini		14
qala	ishumi eli-nesithan-dathu	18	ishumi elinesitho-ba	20

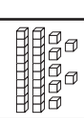
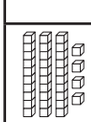
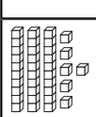
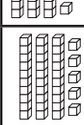
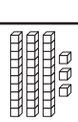
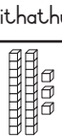
Umsebenzi Wophuculo 2.7

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lamashumi isisi-3.

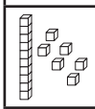
isiphelo	14	ishumi elinesih-lanu		17
	amashumi am-athathu anesine		18	
25		36	37	amashumi amathathu anesithoba
	41	amashumi amabini anesithoba	28	qala

Umsebenzi Wophuculo 2.8

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lemivo isisi-3 .

2	31	amashumi amabini anesibhozo		qala
	amashumi amathathu anesixhenxe		32	
38	4		39	ishumi eline-sithathu
isiphelo	23	isithathu		

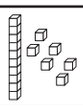
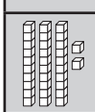
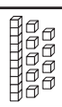
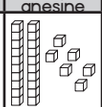
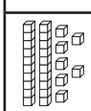
Umsebenzi Wophuculo 2.5: Iimpendulo

qala	21	ishumi elinanye		13
7		amashumi amabini anesihlanu		
	14		amashumi amabini anesine	19
	isihlanu	15	isithandathu	isiphelo

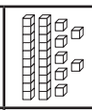
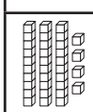
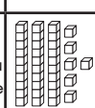
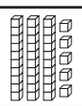
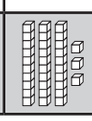
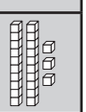
Umsebenzi Wophuculo 2.6: Iimpendulo

isiphelo	12		amashumi amabini anesine	25
	amashumi amabini anesix-henxe		28	
22		isibini		14
qala	ishumi eli-nesithan-dathu	18	ishumi elinesithoba	20

Umsebenzi Wophuculo 2.7: Iimpendulo

isiphelo	14	ishumi elinesihlanu		17
	amashumi am-athathu anesine		18	
25		36	37	amashumi amathathu anesithoba
	41	amashumi amabini anesithoba	28	qala

Umsebenzi Wophuculo 2.8: Iimpendulo

2	31	amashumi amabini anesibhozo		qala
	amashumi amathathu anesixhenxe		32	
38	4		39	ishumi eline-sithathu
isiphelo	23	isithathu		

Umsebenzi Wophuculo 2.9

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lamashumi isisi-4

31	38	amashumi amathathu anesithathu		isiphelo
	amashumi amabini ananye		39	44
amashumi amathathu anesibhozo	45		amashumi amane anesithathu	46
qala	41	amashumi amabini anesihlanu		

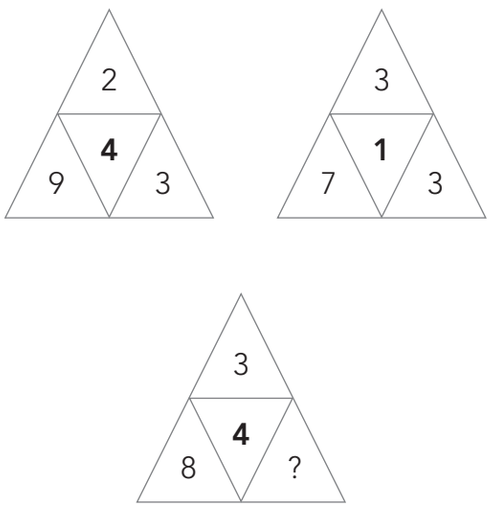
Umsebenzi Wophuculo 2.10

Sebenzisa ilitye elincinane, khangela indlela esuka ekuqaleni ukuya esiphelweni ngokuhambisa ilitye elincinci kwiibhloko apho ixabiso lemivo isisi-4.

47	amashumi amane anesithathu	14	4	isiphelo
	amashumi amathathu ananye		36	46
kune		34	amashumi amane anesihlanu	
qala	48	amashumi amathathu anesixhenxe		amashumi amane anesithoba

Umsebenzi Wophuculo 2.11

Jonga oonxantathu ababinii, uze ufumane inani elizakungena endaweni yophawu lombuzo kunxantathu ongezantsi.

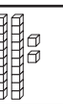
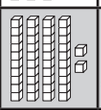


Umsebenzi Wophuculo 2.12

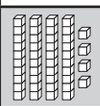
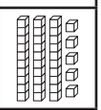
Kwimagazini, iphephandaba okanye isaziso sentengiso, khangela izinto ezintlanu ezinobunzima obuyi -1kg.

Ncamathisela imifanekiso encwadini yakho yezibalo.

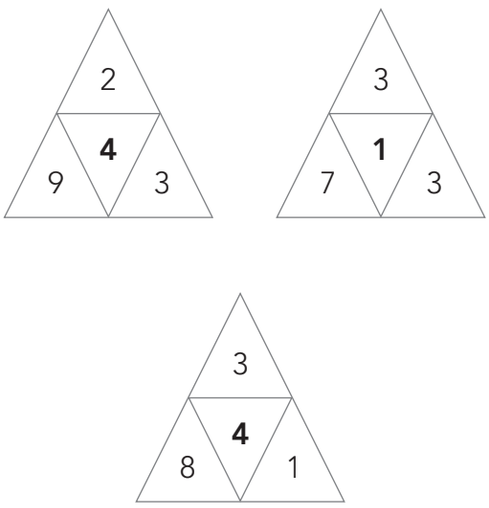
Umsebenzi Wophuculo 2.9: Iimpendulo

31	38	amashumi amathathu ane-sithathu		isiphelo
	amashumi amabini ananye		39	44
amashumi amathathu anesibhozo	45		amashumi amane anesithathu	46
qala	41	amashumi amabini anesihlanu		

Umsebenzi Wophuculo 2.10: Iimpendulo

47	amashumi amane anesithathu	14	4	isiphelo
	amashumi amathathu ananye		36	46
kune		34	amashumi amane anesihlanu	
qala	48	amashumi amathathu anesixhenxe		amashumi amane anesithoba

Umsebenzi Wophuculo 2.11: Iimpendulo

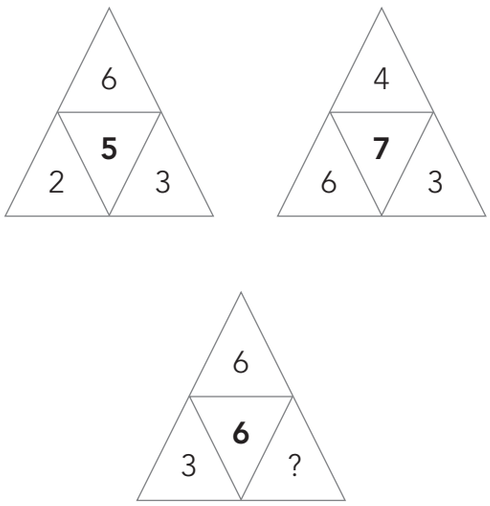


Umsebenzi Wophuculo 2.12: Iimpendulo

Nanku umzekelo wezinto ezintlanu ezinobunzima obungange-1 kg ngobunye bazo.

Umsebenzi Wophuculo 2.13

Jonga oonxantathu ababinii, uze ufumane inani elizakungena endaweni yophawu lombuzo kunxantathu ongezantsi.

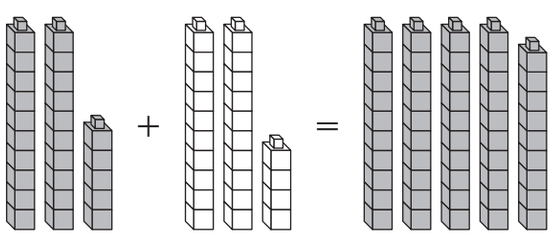


Umsebenzi Wophuculo 2.14

Umama undinike amabhastile angama-48. Kulahleke amabhastile ali-19. Kushiyeke amabhastile amangaphi?

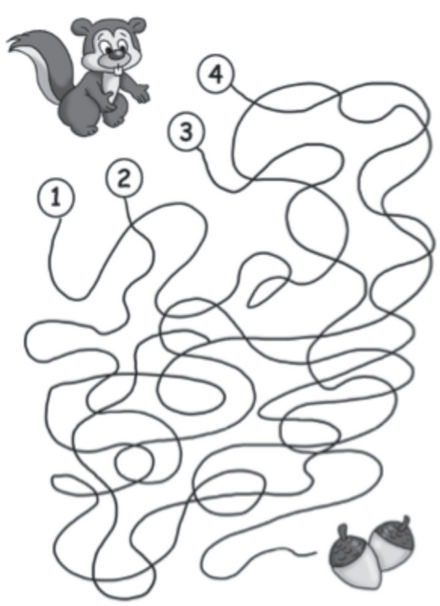
Umsebenzi Wophuculo 2.15

Bhala isivakalisi senani somfanekiso ongezantsi .

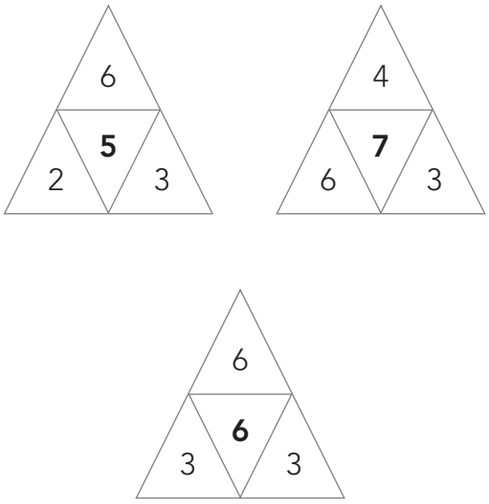


Umsebenzi Wophuculo 2.16

Ngeyiphi indlela enokuthathwa sisilwanyana?



Umsebenzi Wophuculo 2.13: Iimpendulo



Umsebenzi Wophuculo 2.14: Iimpendulo

48 – 19 = □

48 – 19 = 29

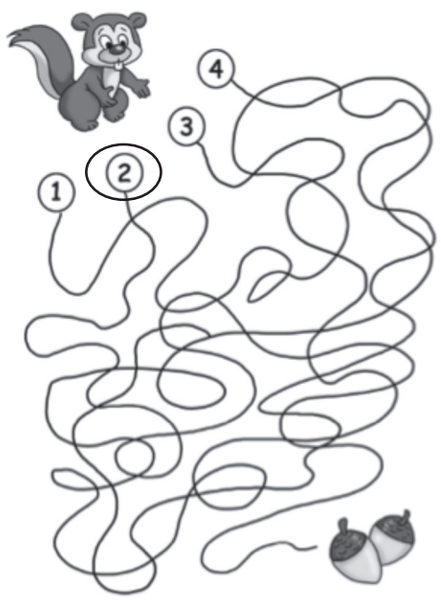
Umsebenzi Wophuculo 2.15: Iimpendulo

25 + 24 = □

24 + 1 + 24 = □

Phinda kabili 24 + 1 = □

Umsebenzi Wophuculo 2.16: Iimpendulo



Umsebenzi Wophuculo 2.17

Ezi ngqekembe zenza i-R1.

Ingaba yile ndibanisela kuphela na?.

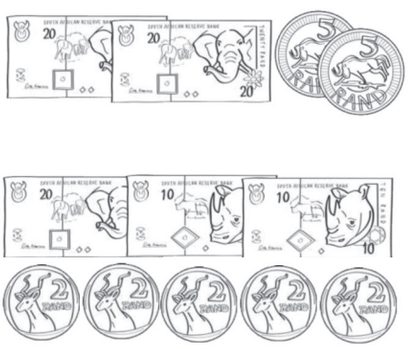
Umsebenzi Wophuculo 2.18

Lolu hlweza nemali engamaphepha kuzokwakha ama-R20.

Ingaba yile ndibanisela kuphela na?.

Umsebenzi Wophuculo 2.19

Lolu hlweza nemali engamaphepha kuzokwakha ama-R50.



Ingaba yile ndibanisela kuphela na?.

Umsebenzi Wophuculo 2.20

Iza kuba yintoni imilo yepatheni elandelayo?

Umsebenzi Wophuculo 2.17: Iimpendulo

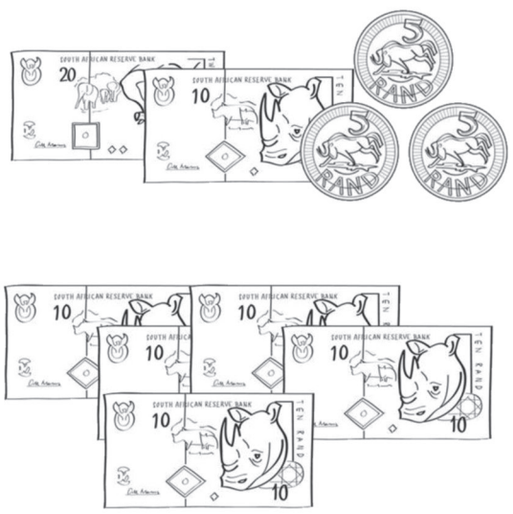
Hayi, nazi iindibanisela ezimbalwa.

Umsebenzi Wophuculo 2.18: Iimpendulo

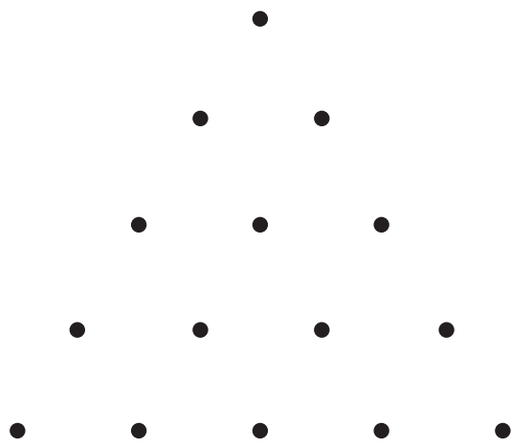
Hayi, nazi iindibanisela ezimbalwa.

Umsebenzi Wophuculo 2.19: Iimpendulo

Hayi, nazi iindibanisela ezimbalwa.

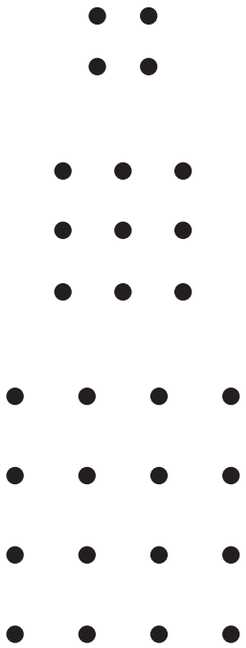


Umsebenzi Wophuculo 2.20: Iimpendulo



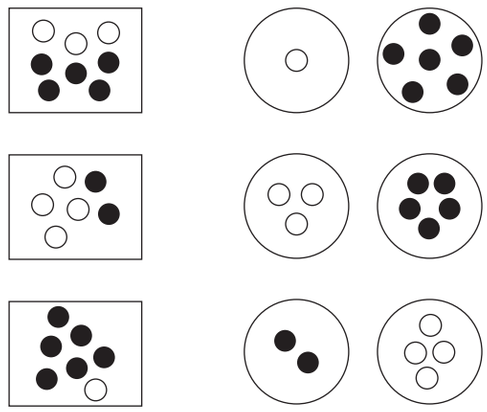
Umsebenzi Wophuculo 2.21

Zoba ipatheni elandelayo.



Umsebenzi Wophuculo 2.22

Tshatitsa izinto ezihleliweyo nomfanekiso.



Umsebenzi Wophuculo 2.23

Gqibezela itheyibhile.

×	4	5	10
2			
3			
10			

Dibanisa amanani amabini amakhulu kunawo onke.

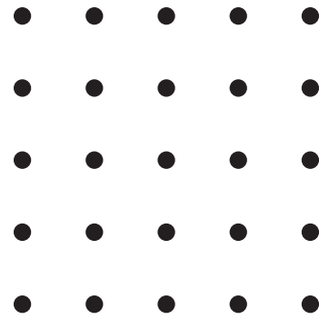
Umsebenzi Wophuculo 2.24

Gqibezela itheyibhile.

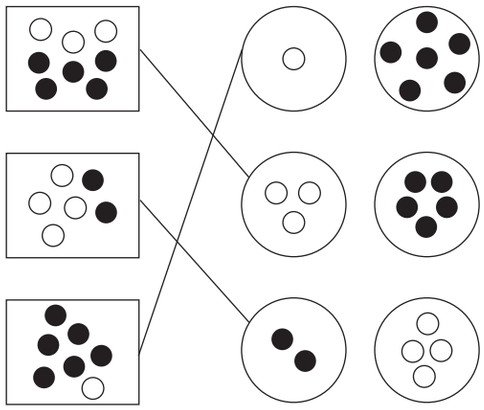
×	3	4	5
4			
5			
6			

Dibanisa amanani amabini amancinci kunawo onke.

Umsebenzi Wophuculo 2.21: Iimpendulo



Umsebenzi Wophuculo 2.22: Iimpendulo



Umsebenzi Wophuculo 2.23: Iimpendulo

×	4	5	10
2	8	10	20
3	12	15	30
10	40	50	100

100 + 50 = 150

Umsebenzi Wophuculo 2.24: Iimpendulo

×	3	4	5
4	12	16	20
5	15	20	25
6	18	24	30

12 + 15 = 27

Umsebenzi Wophuculo 2.25

Gqibezela itheyibhile.

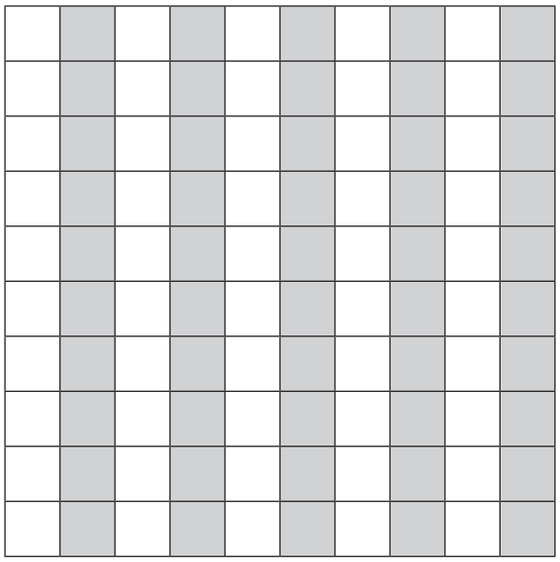
×	1	2	3
1			
2			
3			

Dibanisa zonke iimpendulo.

Umsebenzi Wophuculo 2.26

Bhala amanani ukusuka ku-1-100 kwibhodi yamanani

Yeyiphi ipatheni enombala ohlokihliweyo.



Umsebenzi Wophuculo 2.27

Gqibezela itheyibhile.

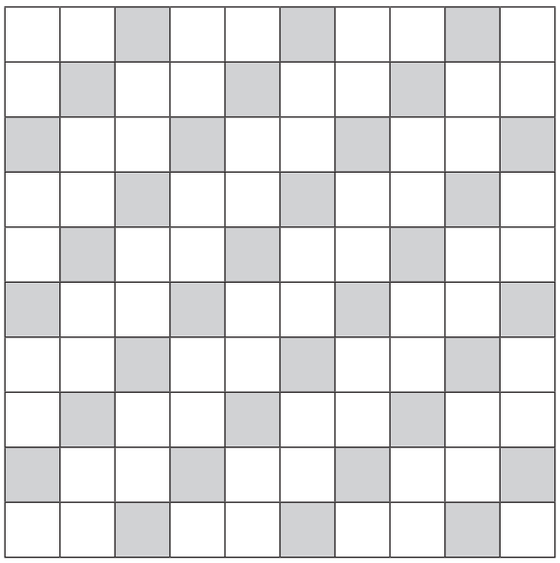
×	3	4	5
4			
5			
6			

Dibanisa amanani amathathu amancinane.

Umsebenzi Wophuculo 2.28

Bhala amanani ukusuka ku-1 - 100 kwibhodi yamanani.

Yeyiphi ipatheni enombala ohlokihliweyo.



Umsebenzi Wophuculo 2.25: Iimpendulo

×	1	2	3
1	1	2	3
2	2	4	6
3	3	6	9

1 + 2 + 3 + 2 + 4 + 6 + 3 + 6 + 9 = 36

Umsebenzi Wophuculo 2.26: Iimpendulo

Iziphindwa zesi-2 zifakelwe umbala.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Umsebenzi Wophuculo 2.27: Iimpendulo

×	3	4	5
4	12	16	20
5	15	20	25
6	18	24	30

12 + 15 + 18 = 45

Umsebenzi Wophuculo 2.28: Iimpendulo

Iziphindwa zesi-3 zifakelwe umbala.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Umsebenzi Wophuculo 2.29

Gqibezela itheyibhile.

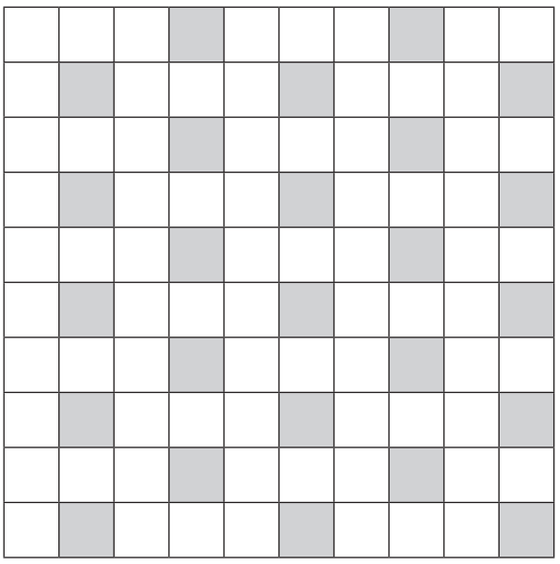
×	1	4	5
7			
8			
9			

Dibanisa iimpendulo ezimbini ezinkulu.

Umsebenzi Wophuculo 2.30

Bhala amanani ukusuka ku-1-100 kwibhodi yamanani.

Yeyiphi ipatheni enombala ohlokihliweyo.



Umsebenzi Wophuculo 2.31

Tshatisa igama nomfanekiso..

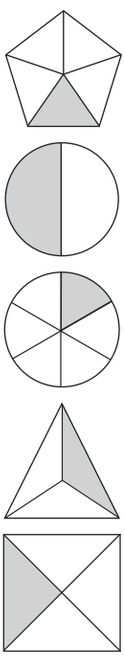
ihafu e-1

ikota e-1

isi-1 sesithathu

isi-1 sesihlanu

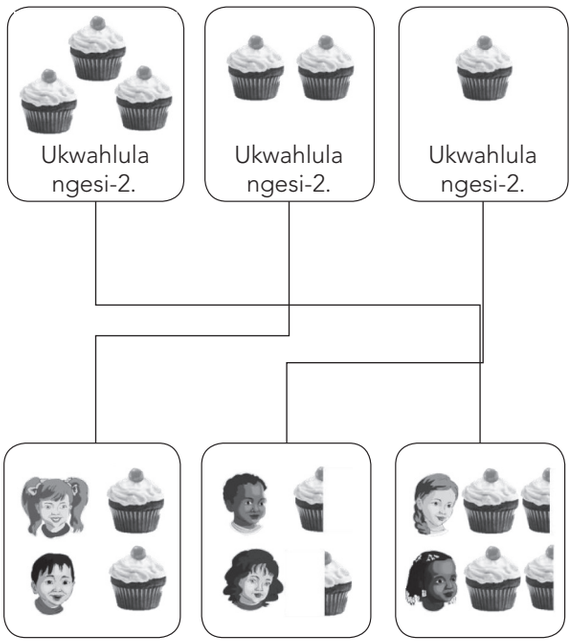
isi-1 sesithandathu



Siwasebenzisa phi ebomini bethu amaqhezu?

Umsebenzi Wophuculo 2.32

Thola indlela.



Bhala isibalo samazwi kwisibalo ngasinye.

Umsebenzi Wophuculo 2.29: Iimpendulo

×	1	4	5
7	7	28	35
8	8	32	40
9	9	36	45

45 + 36 = 81

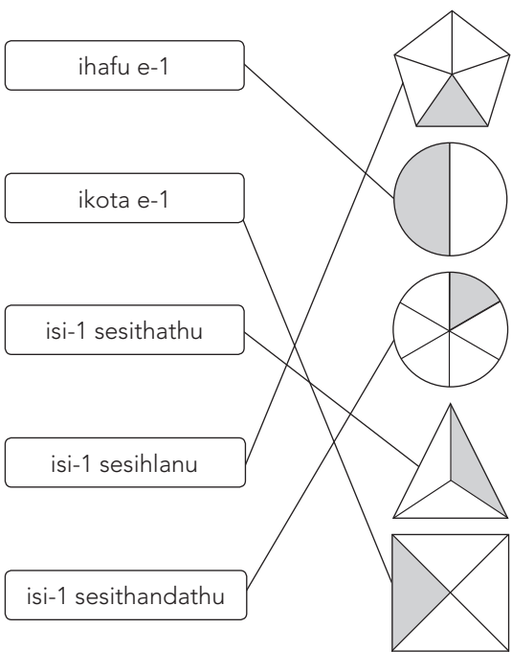
Umsebenzi Wophuculo 2.30: Iimpendulo

Iziphindwa zesi-4 mazifakwe imibala.

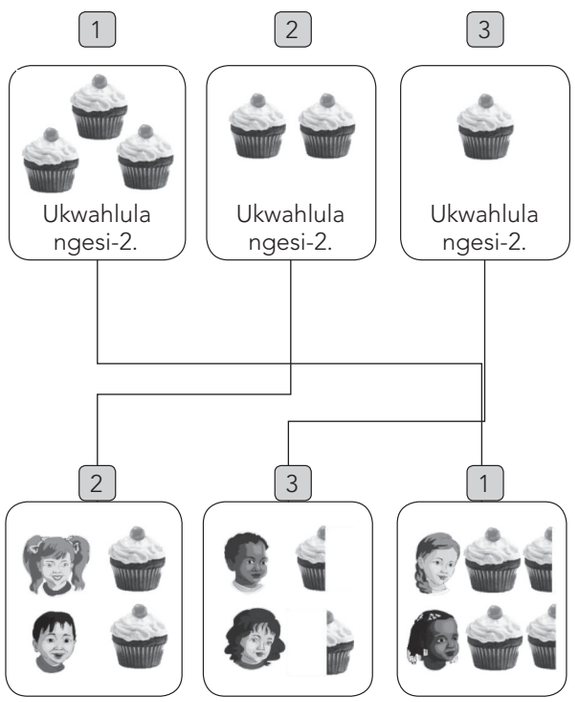
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Umsebenzi Wophuculo 2.31: Iimpendulo

Qondanisa amakhadi.

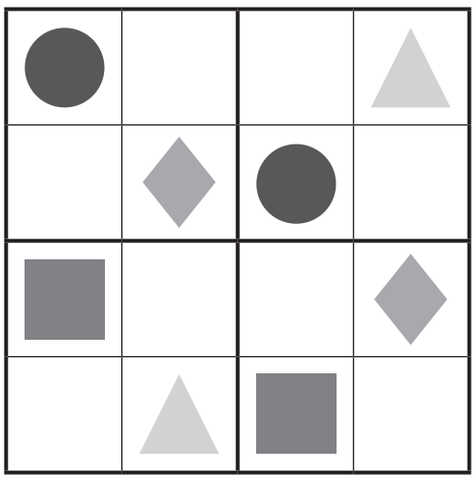


Umsebenzi Wophuculo 2.32: Iimpendulo



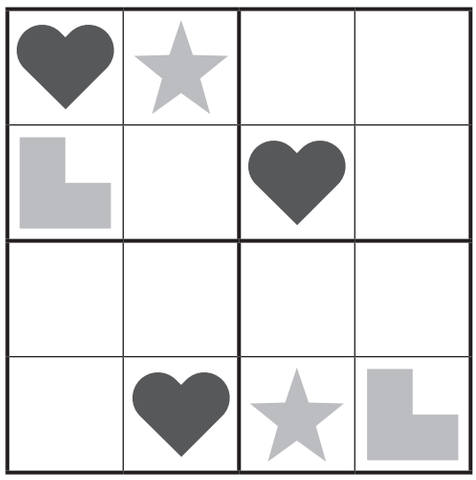
Umsebenzi Wophuculo 2.33

Fakela iimilo zeSudoku ezishiyiweyo..



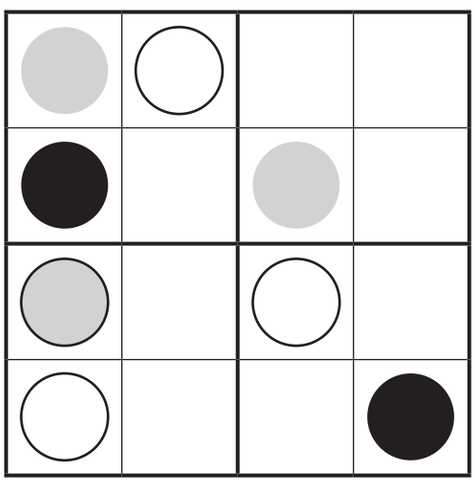
Umsebenzi Wophuculo 2.34

Fakela iimilo zeSudoku ezishiyiweyo..



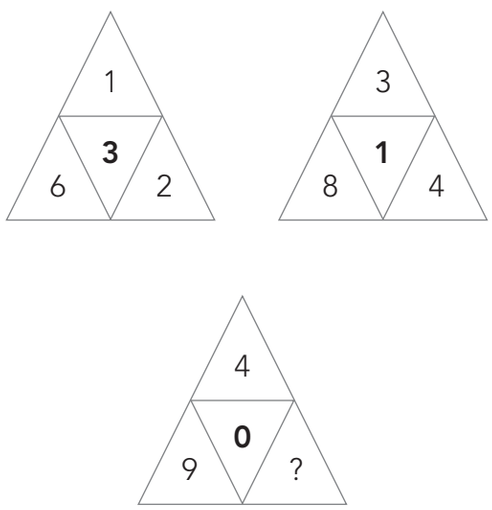
Umsebenzi Wophuculo 2.35

Fakela iimilo zeSudoku ezishiyiweyo..

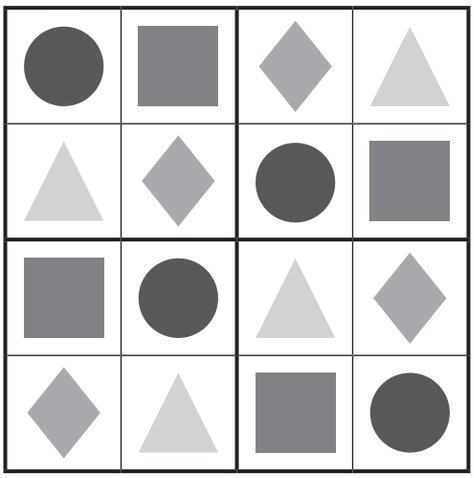


Umsebenzi Wophuculo 2.36

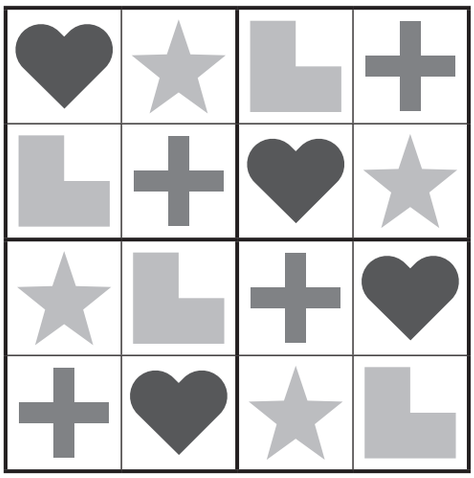
Jonga oonxantathu ababinii, uze ufumane inani elizakungena endaweni yophawu lombuzo kunxantathu ongezantsi.



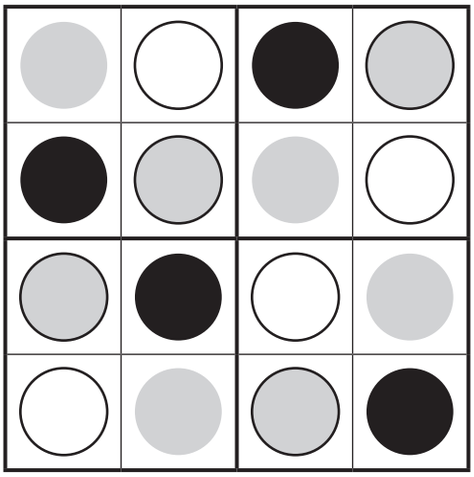
Umsebenzi Wophuculo 2.33: Iimpendulo



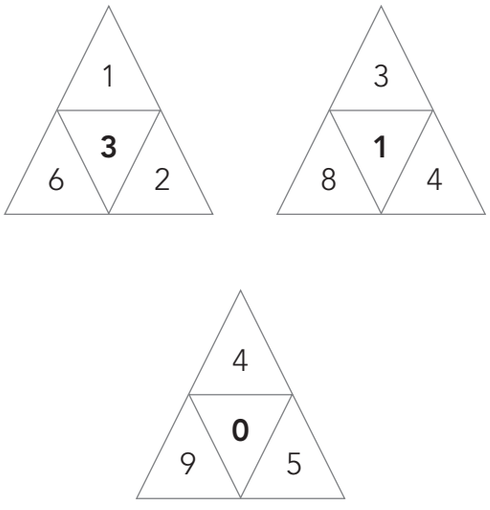
Umsebenzi Wophuculo 2.34: Iimpendulo



Umsebenzi Wophuculo 2.35: Iimpendulo

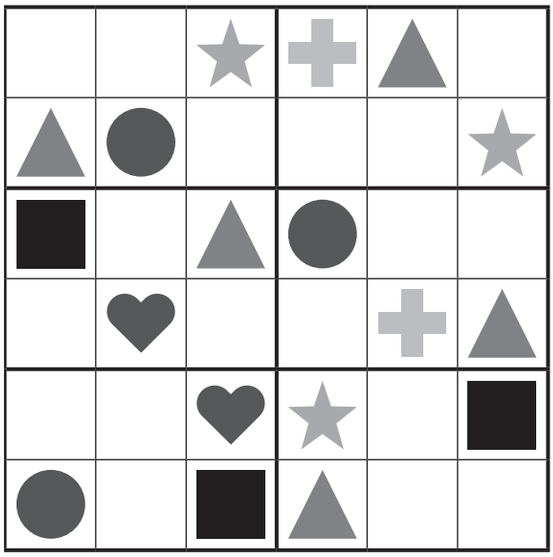


Umsebenzi Wophuculo 2.36: Iimpendulo



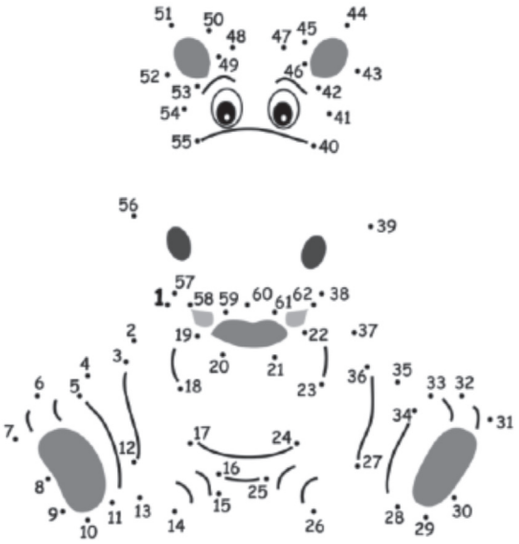
Umsebenzi Wophuculo 2.37

Fakela iimilo zeSudoku ezishiyiweyo..



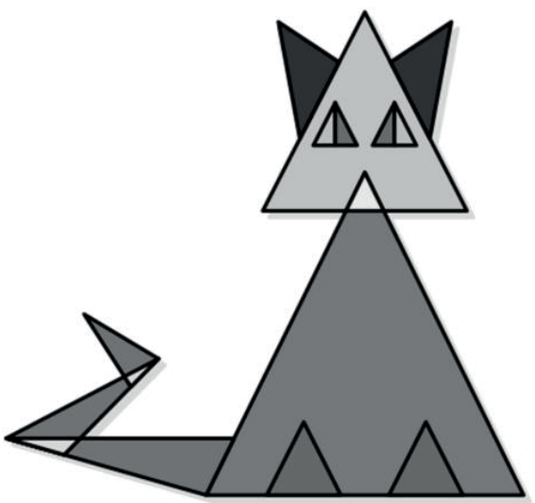
Umsebenzi Wophuculo 2.38

Sizakuba sesiphi esi isilwanyana?



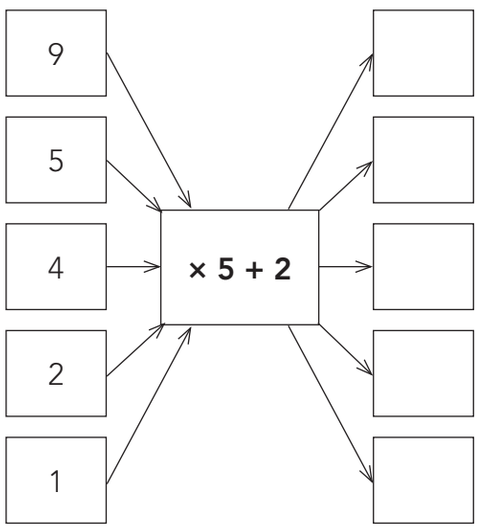
Umsebenzi Wophuculo 2.39

Bangaphi oonxantathu abahlukileyo onokubabala kulo mfanekiso?

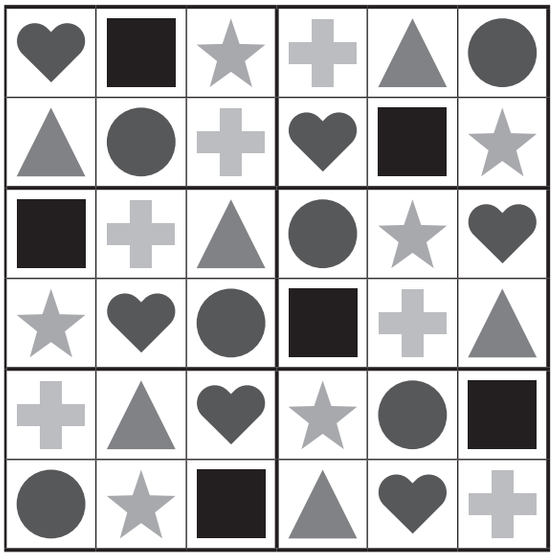


Umsebenzi Wophuculo 2.40

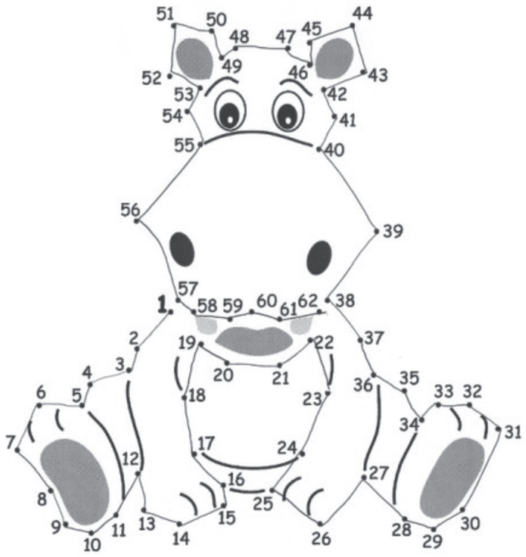
Gqibezela umfanekiso wesigcawu.



Umsebenzi Wophuculo 2.37: Iimpendulo

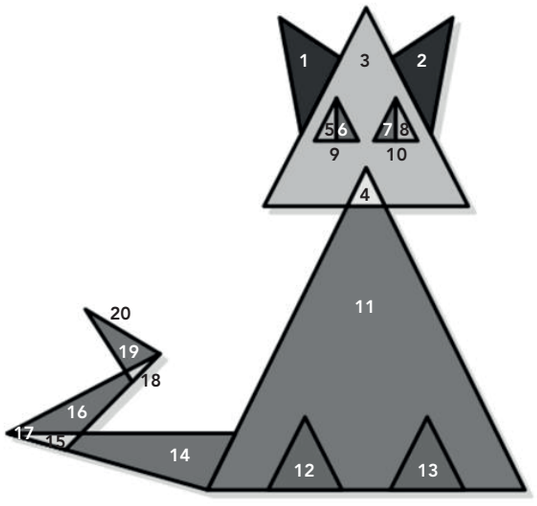


Umsebenzi Wophuculo 2.38: Iimpendulo



Umsebenzi Wophuculo 2.39: Iimpendulo

oonxantathu abangama-20



Umsebenzi Wophuculo 2.40: Iimpendulo