



MATHEMATICS PROGRAMME FOR GRADE 10 LEARNERS FROM 27 APRIL – 8 MAY 2020

TOPIC: Analytical Geometry

MARKS IN EXAMINATION PAPER: 15 +/- 3 Marks in Paper 2

MAIN RESOURCE(S) SUGGESTED: Everything Maths (Siyavula) grade 10

ADDITIONAL RESOURCES: Final Examination Question Papers

MEDIA: DSTV Channel 319

USE OF EVERYTHING MATHS (SIYAVULA) GRADE 10

2 WEEKS: 27 APRIL – 08 MAY 2020

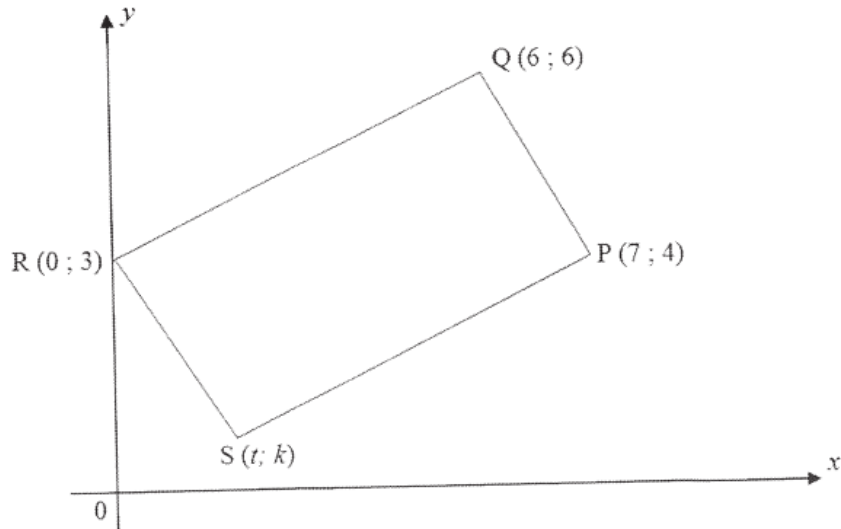
USE EVERYTHING MATHS (SIYAVULA) GRADE 10 (PAGE 284 TO 327) AS FOLLOWS:

- It can be an advantage if one can first sign up to SIYAVULA (www.siyavula.com).
- To get answers for exercises use codes in the textbook below exercises and log in to SIYAVULA (www.siyavula.com)
- Read and follow the explanation about each sub-topic/ concept.
- Follow and practice Examples indicated 'WORKED EXAMPLES'.
- Then do Activities without looking at the solutions first.
- Then check your solutions against solutions provided.
- Then do corrections.
- Double or triple check if you are able to do Activities on your own without looking at the solutions until you master the concept(s).

	DATE	CHAPTER 8 SUB-TOPIC	EXAMPLES	ACTIVITY	PAGE(S)
WEEK 1	27/04	8.1. Drawing figure in a Cartesian plane(plotting)	Read and try to understand explanation in page 284	8 - 1	284 -
	28/04	8.2. Distance between two points	1 - 2	8 - 2	288 – 293
	29/04	8.3. Gradient of a line	3 - 9	8 -3	294 - 308
	30/04	Gradient of a line continues		8 - 4	
	01/05	8.4. Mid-point of a line	10 - 13	8 - 5	308 - 314
WEEK 2	04/05	8.5. Summary of the topic	Read on summary given and work on the activity.	8 – 6 (No. 1 to 15)	315 – 320
	05/05	Activity 8-6 continues	Continue with the activity.	8 – 6 (No 16 to 30)	320 - 322
	06/05	Activity 8-6 continues	Continue with the activity	8 – 6 (No 31 to 47)	323 - 326
	07/05	Previous question paper attached in the program	NATIONAL FINAL PAPER NOVEMBER 2017	Question 3 ATTACHED IN PAGE 2	
	08/05	Previous question paper attached in the program	NATIONAL FINAL PAPER NOVEMBER 2018	Question 2 ATTACHED IN PAGE 3	

QUESTION 3

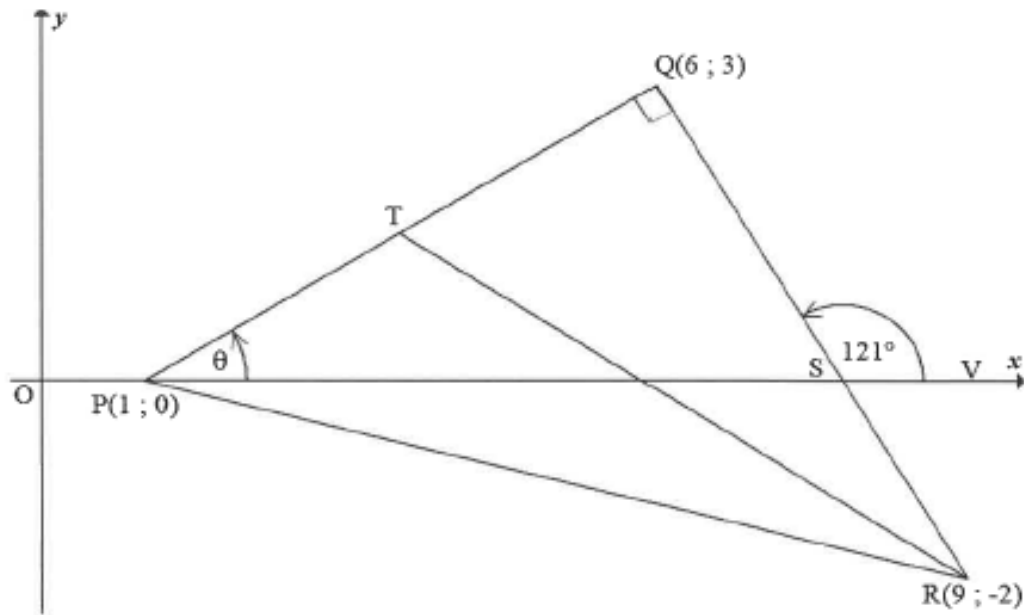
In the diagram below, $P(7 ; 4)$, $Q(6 ; 6)$, $R(0 ; 3)$ and $S(t ; k)$ are the vertices of quadrilateral PQRS.



- 3.1 Calculate the length of PQ. Leave your answer in surd form. (2)
- 3.2 If $T\left(\frac{7}{2}; \frac{7}{2}\right)$ is the midpoint of QS, determine the coordinates of S. (3)
- 3.3 If the coordinates of S are $(1 ; 1)$, show that $PR = QS$. (2)
- 3.4 Show that $QR \perp RS$. (4)
- 3.5 Hence, what type of special quadrilateral is PQRS? Motivate your answer. (2)
- 3.6 Calculate the size of \hat{RSQ} . (3)
- [16]**

QUESTION 2

In the diagram below, $P(1 ; 0)$, $Q(6 ; 3)$ and $R(9 ; -2)$ are the vertices of a triangle such that $PQ = QR$ and $PQ \perp QR$. T is a point on PQ such that T is the midpoint of PQ . S is the point of intersection of RQ and the x -axis. V is a point on the x -axis such that $\widehat{QSV} = 121^\circ$. $\widehat{QPS} = \theta$



- 2.1 Determine the:
 - 2.1.1 Length of PQ . Leave your answer in surd form. (2)
 - 2.1.2 Gradient of PQ (2)
 - 2.1.3 Coordinates of T (2)
 - 2.2 Calculate the:
 - 2.2.1 Area of ΔQTR (3)
 - 2.2.2 Size of θ , with reasons (2)
 - 2.2.3 Coordinates of S (3)
 - 2.3 Determine, with reasons, the gradient of the line through T and the midpoint of PR . (3)
- [17]**

REMEMBER, PRACTICE MAKES PERFECT!

SO, PRACTICE, PRACTICE AND PRACTICE!

building blocks for growth.



Ikamva eliqaqambileyo!