



Province of the  
**EASTERN CAPE**  
EDUCATION

**DIRECTORATE SENIOR CURRICULUM MANAGEMENT (SEN-FET)**

**HOME SCHOOLING SELF-STUDY WORKSHEET**

<b>SUBJECT</b>	<b>WELDING AND METALWORK</b>	<b>GRADE</b>	12	<b>DATE</b>	JULY 2020
<b>TOPIC</b>	MAINTENANCE & TERMINOLOGY	<b>TERM 1 REVISION</b>	()	<b>TERM 3 CONTENT</b>	(√)
<b>TIME ALLOCATION</b>	2 hrs.	<b><u>TIPS TO KEEP HEALTHY</u></b>			
<b>INSTRUCTIONS</b>	This study material is focuses on two topics (Maintenance & Terminology) and is intended to assist learners in grasping various possible examination questions..	<ol style="list-style-type: none"><li>1. <b>WASH YOUR HANDS</b> thoroughly with soap and water for at least 20 seconds. Alternatively, use hand sanitizer with an alcohol content of at least 60%.</li><li>2. <b>PRACTICE SOCIAL DISTANCING</b> – keep a distance of 1m away from other people.</li><li>3. <b>PRACTISE GOOD RESPIRATORY HYGIENE:</b> cough or sneeze into your elbow or tissue and dispose of the tissue immediately after use.</li><li>4. <b>TRY NOT TO TOUCH YOUR FACE.</b> The virus can be transferred from your hands to your nose, mouth and eyes. It can then enter your body and make you sick.</li><li>5. <b>STAY AT HOME.</b></li></ol>			

## **QUESTION 1 MAINTENANCE**

- 1.1 Give TWO reasons for the maintenance of machines in the welding workshop.
- 1.2 Give the reason why one applies lock-out on machines during maintenance.
- 1.3 Give TWO reasons why it is important to keep service records of the machines.
- 1.4 Name TWO methods to reduce friction when drilling holes.

## **QUESTION 2 MAINTENANCE**

- 2.1 Discuss ONE reason why one applies lock-out on large machines before maintenance.
- 2.2 Why do tagging plates, used to lock-out and tag machines during maintenance, have multiple holes?
- 2.3 Maintenance is essential to ensure a safe working environment. State TWO aspects that should NOT be ignored during this process.
- 2.4 State TWO general maintenance guidelines of the horizontal band saw.
- 2.5 State TWO effects due to overloading of a rolling machine.

## **QUESTION 3 TERMINOLOGY (DEVELOPMENT) (SPECIFIC)**

- 3.1 Describe the function of transformers used in ventilation ducts.
- 3.2 Use freehand sketches to indicate the difference between an on-centred hopper and an off-centred hopper.

**QUESTION 4 TERMINOLOGY (DEVELOPMENT) (SPECIFIC)**

FIGURE 1 below shows a truncated cone.

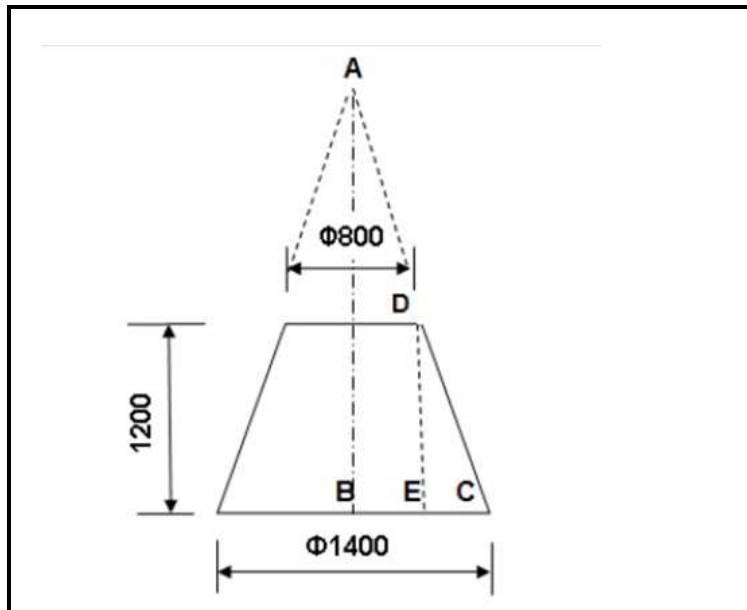


FIGURE 1

Using information provided in Figure 1 to calculate:

- 4.1 Base circumference
- 4.2 Main radius (AC)
- 4.3 Small radius (AD)

### QUESTION 5

5.1 FIGURE 2 below shows an off-centre square to rectangular hopper.

Vertical height (VH) of the hopper = 500 mm.

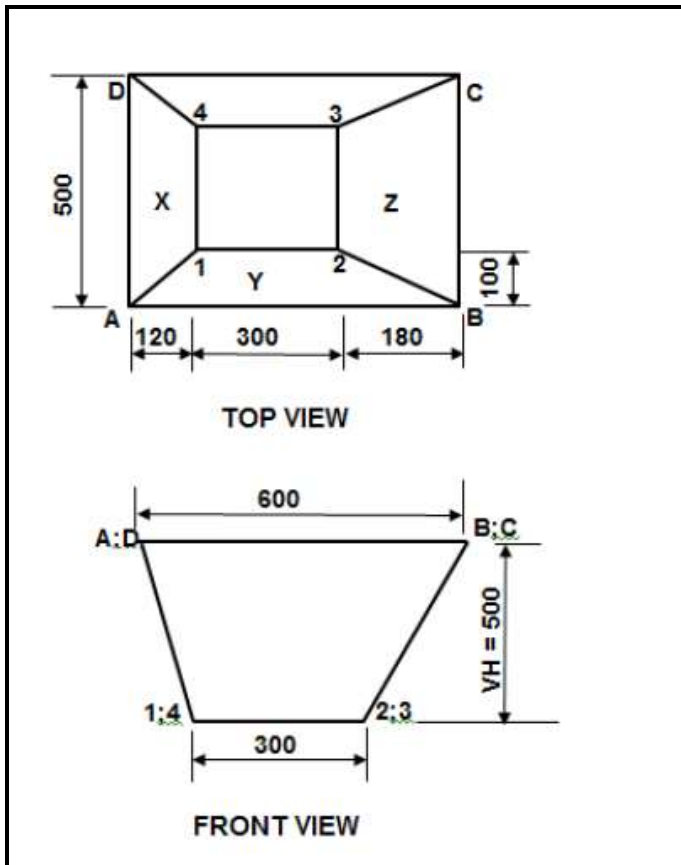


FIGURE 2

Calculate the true length of the following:

5.1.1 A-1

5.1.2 A-2

5.1.3 B-2

5.1.4 B-3

5.1.5 D-1