



**UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION**

**AEGROTAT AND SUPPLEMENTARY EXAMINATION
JULY 2014**

PROGRAMME: FOUNDATION PHASE
MODULE: MATHEMATICS FOR TEACHING FOUNDATION PHASE 3A
CODE: **MFP3A10**
TIME: 3 HOURS
MARKS: 110
EXAMINERS: Mr J Maseko and Dr. K. Luneta
MODERATORS: Dr. P. J. Makonye

(This paper consists of 4 pages)

INSTRUCTIONS:

Read each question carefully before answering it. Answer all the questions.
Questions can be answered in any sequence but ensure that you clearly number
your answers. Calculators are not allowed.

QUESTION 1 – Theory

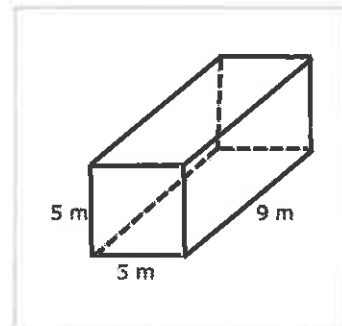
[20]

- 1.1 Name five attributes of measurement (5)
- 1.2 What are the two standard units of measurement systems used in the world? (2)
- 1.3 What is the difference between capacity and volume? (4)
- 1.4 What are the three basic steps involved in the concept of measurement? (3)
- 1.5 Discuss the conditions that alternate interior angle can be equal in size. (3)
- 1.6 Describe three different methods of collecting data. (3)

QUESTION 2 – Measurement

[35]

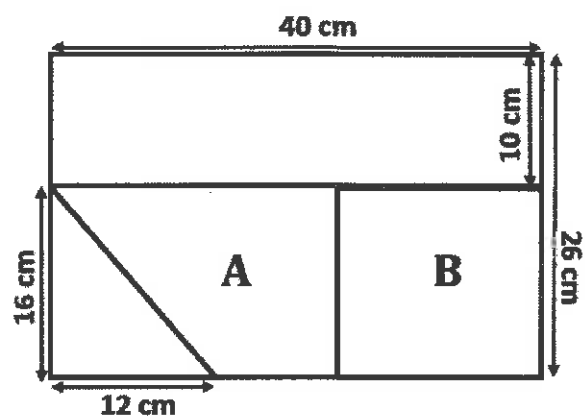
2.1 The figure (prism) has the dimensions shown in the diagram.



- 2.1.1 Calculate the area of the front face (square) of the prism (4)
- 2.1.2 Calculate the Volume of this structure (4)
- 2.1.3 Calculate the total Surface Area of the figure (8)
- 2.1.4 Express the Surface Area of the figure in km^2 (4)

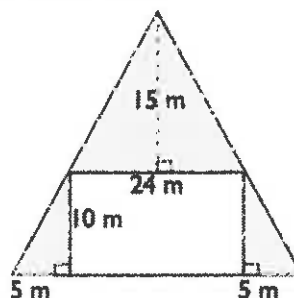
2.2 There are five shapes in the figure including the complete shape. The shapes are:

- a small rectangle,
- a triangle,
- a trapezium (A),
- a square (B), and
- a big rectangle.



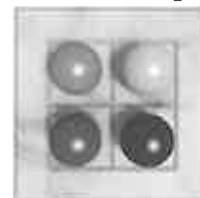
- 2.2.1 Calculate the perimeter of the **big rectangle** (3)
- 2.2.2 Calculate the perimeter of shape A (4)
- 2.2.3 Calculate the area of shape B (3)

2.3 Calculate the size of the shaded area of this figure below (5)



QUESTION 3 – Data Handling**[20]****3.1**

6 learners during Life Skills class threw a tennis ball to heat one of the coloured balloons. Look at the information below after they have taken 10 turns on the game. Use the balloons' colours to group the data into a tally chart.



Red	Green	Blue	Green	Black	Blue	Blue	Blue	Red	Black
Green	Red	Red	Red	Blue	Red	Black	Blue	Black	Blue
Black	Blue	Red	Blue	Red	Black	Blue	Red	Red	Red
Black	Red	Green	Green	Red	Black	Red	Black	Blue	Green
Red	Blue	Black	Green	Blue	Red	Black	Red	Black	Blue
Green	Red	Green	Red	Blue	Red	Black	Blue	Green	Blue

3.1.1 Draw a frequency table to represent this information (4)

3.1.2 Draw a pie chart to show the results summarised in 3.1.1 (4). Show all the calculations (4) (8)

3.1.3 Draw a bar chart to represent this information (4)

3.2 The table gives information about 8 animals the grade 3 learners have seen in real life

Animal	Ant	Bat	Cat	Dog	Eagle	Fish	Goat	Horse
Seen	27	10	16	30	5	10	12	9

Use this information to draw a **line** graph. (4)

QUESTION 4 - Data Handling**[13]**

Given that the following were the marks attained by a grade R class out of 10:

7 7 8 6 6 6 8 6 9 1 9 5 1 1 2 2 2 3 2 4 6 9 7 5 6 4 5 3 4 2 6 5 4 1 7

4.1 Draw a frequency table to represent this information (4)

4.2 Find the Mean mark (3)

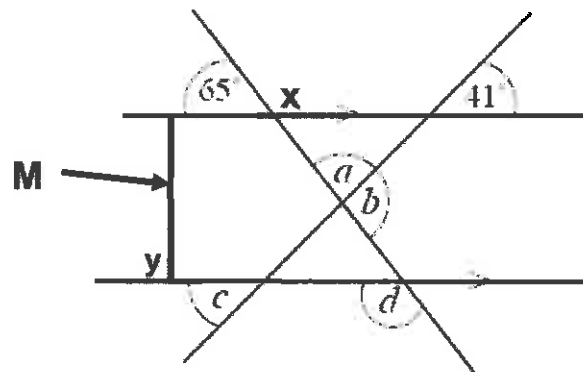
4.3 Find the Modal mark (2)

4.4 Find the Median of the marks (2)

4.5 Find the Range of the mark (2)

QUESTION 5 – Angles in quadrilateral**[22]**

In this diagram two lines are parallel as marked



- 5.1 Find the size of the angle marked a (5)
- 5.2 Find the size of the angle marked b (2)
- 5.3 Find the size of the angle marked c (2)
- 5.4 What is the name of angle x (adjacent to 65°)? Explain why. (4)
- 5.5 If line M is perpendicular to the two parallel lines, what is the size of the angle marked y ? (3)
- 5.6 You have a regular polygon with 8 sides. Show all the calculations.
- 5.6.1 What is the size of each angle? (3)
- 5.6.2 What is the sum of interior angles? (3)

END OF EXAMINATION**TOTAL = 110**