PROGRAMME: B Ed FOUNDATION PHASE

MODULE: MATHEMATICS FOR TEACHING FOUNDATION PHASE 3A

CODE: **MFP10A3 and MFP3A10**

TIME: 2 hours

MARKS: 100

EXAMINER: Mr J Maseko

MODERATOR: 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 answer in any sequence but ensure that you clearly number

your answers. Calculators are not allowed.

QUESTION 1 – Theory **[16]**

1.1 Name five attributes of measurement (5)

1.2 What are the two standard units of measurement systems used in the (2)
world?

1.3 What are the three basic steps involved in the concept of measurement? (3)

1.4 Discuss the conditions that alternate interior angle can be equal in size. (3)

1.5 Describe three different methods of collecting data. (3)

QUESTION 2 – Measurement **[35]**

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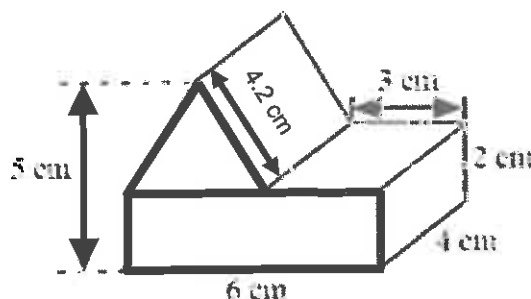

2.1.1 Calculate the area of the **front face** of the prism (**bold lines**) (6)

2.1.2 Calculate the Volume of this structure (4)

2.1.3 Calculate the total Surface Area of the figure – all around (8)

2.1.4 Express the Surface Area of the figure in m^2 (2)

2.2 Calculate the size of the shaded area of this figure below (5)
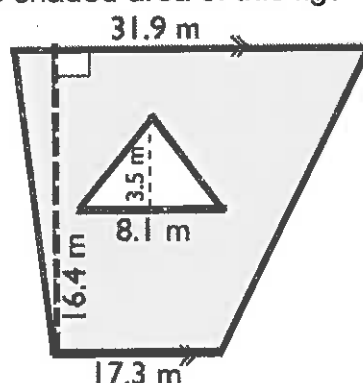
| **2.3** There are five shapes in the figure including the complete shape. The shapes are:
• a small rectangle,
• a triangle,
• a trapezium (**A**),
• a square (**B**), and
• a big rectangle. | |
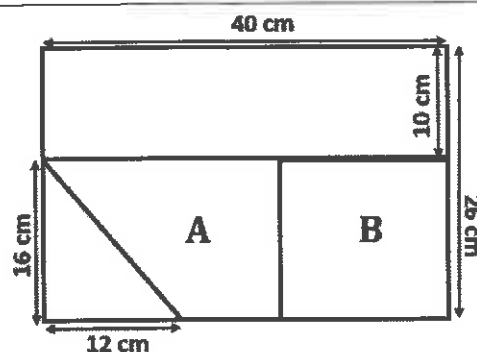
2.3.1 Calculate the perimeter of the **big rectangle** (3)

2.3.2 Calculate the perimeter of shape **A** (4)

2.3.3 Calculate the area of shape **B** (3)

QUESTION 3 - Data Handling [16]

Given that the following were the marks attained by a grade 1 class out of 10:

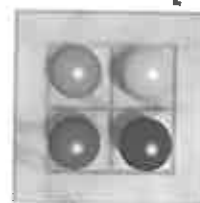1 9 5 1 1 2 2 2 3 2 4 6 7 7 8 6 6 6 8 6 9 9 7 5 6 4 5 3 4 2 6 5 4 1 7

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

3.2   Find the Mean mark (3)

3.3   Find the Modal mark (2)

3.4   Find the Median of the marks (2)

3.5   Use the "offloading method" to show how to get the average **49** of the following numbers (5)

	15	55	118	34	23
Offloads					
New numbers					
Offloads					
New numbers					
Offloads					
New numbers					

QUESTION 4 – Data Handling [12]

4.1

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 letters **B, G, R, Y** to group the data into a tally chart.
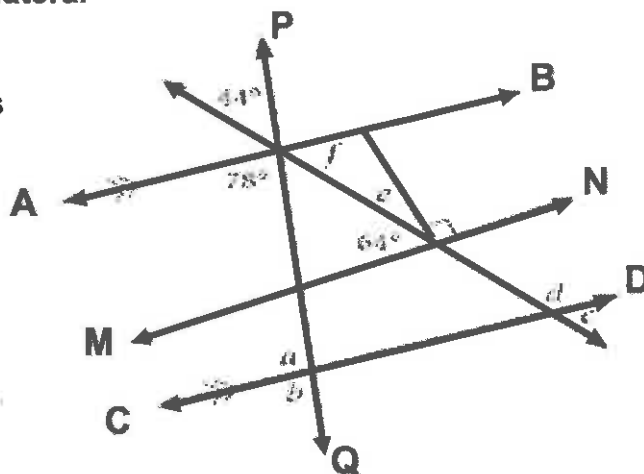

Y	G	B	G	Y	B	B	B	R	Y
G	R	G	R	B	R	Y	B	G	B
Y	B	R	B	R	Y	B	R	R	R
Y	R	G	G	G	R	R	Y	B	G
R	B	Y	G	G	R	Y	R	Y	B
G	R	G	R	B	R	Y	B	G	B

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

4.1.2   Draw a **pie** chart to show the results summarised in 4.1.1 (4). (8)

Show all the calculations (4)

QUESTION 5 – Angles in quadrilateral [21]

Using this diagram to answer all
the questions and provide reasons
for each case. **AB // CD**

5.1	What is the size of angle **a**?	(3)
5.2	What is the size of angle **b**?	(2)
5.3	What is the size of angle **c**?	(3)
5.4	What is the size of angle **d**?	(2)
5.5	What is the size of angle **e**?	(3)
5.6	What is the size of angle **f**?	(3)

5.7 You have a regular polygon with 15 sides. Show all the calculations.

5.7.1	What is the size of each interior angle?	(3)
5.7.2	What is the sum of interior angles?	(2)

TOTAL: 100

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