education

Department of Education
FREE STATE PROVINCE

SURNAME:			**____ 50**
NAME:			
SCHOOL:			**%**
DATE:			
GRADE 7 _____	**BOY (MARK WITH X)**	**GIRL (MARK WITH X)**	**LEVEL:**

Question	**1**	**2**	**3**	**4**	**5**	**6**
Total Marks	**12**	**8**	**7**	**9**	**6**	**8**
Marks obtained						

GRADE 7

MATHEMATICS PAPER 2

NOVEMBER 2024

TIME: 90 MINUTES

MARKS: 50

This paper consists of 11pages.

INSTRUCTIONS:

1. Read ALL the questions carefully.
2. Answer ALL the questions in the spaces or frames provided.
3. ALL calculations must be shown on the question paper.
4. You are NOT allowed to use a calculator.
5. You may use any mathematically correct method.
6. Note that diagrams are NOT drawn to scale.
7. Write neatly and legibly.

QUESTION 1 (GEOMETRY OF STRAIGHT LINES & CONSTRUCTION OF GEOMETRIC FIGURES)

1.1 Define the following terms:

1.1.1 Ray (1)

_____

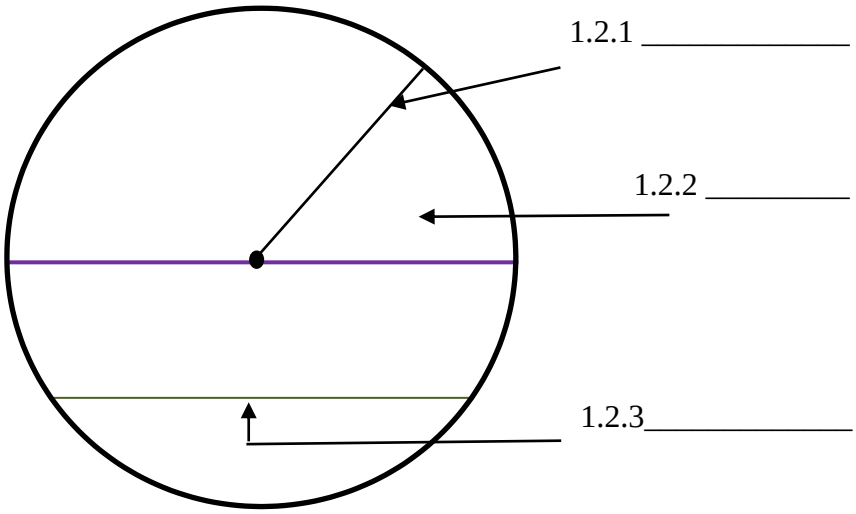
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1.1.2 Diameter (1)

_____

_____

1.2 Label the following parts of the circle: (3)



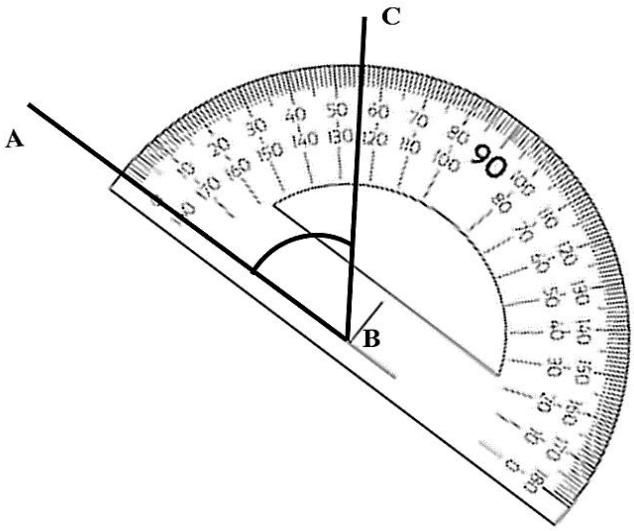
1.3 If the diameter of the above circle is 9 units, calculate the radius. (1)

_____

1.4 Construct an angle of 60^0 from ray MN = 6 cm without using a protractor. (3)

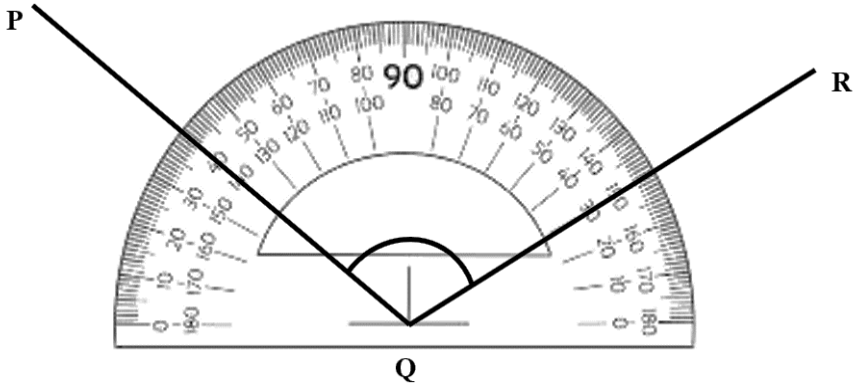
1.5 What is the measurement of the following angles?

1.5.1 (1)



_____

1.5.2 (1)

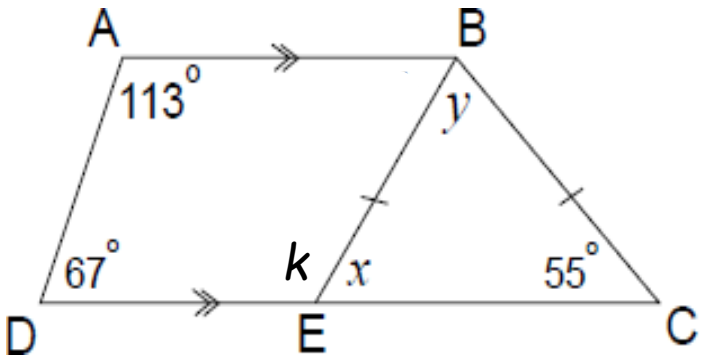


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[11]

QUESTION 2 (GEOMETRY OF 2D SHAPES)

2.1 Study the diagram provided and then answer the questions that follow.



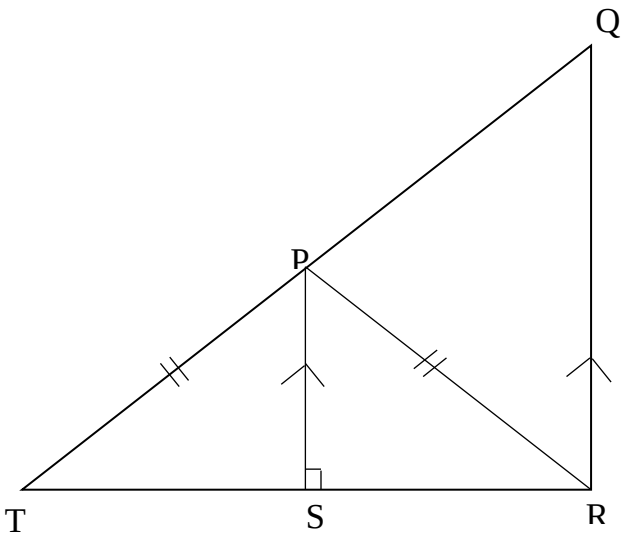
2.1.1 Write down the size of angle x. (1)

_____

2.1.2 Calculate the size of angle k. (1)

_____

2.2 Consider the figure below and then answer the questions that follow.



2.2.1 Complete: PS// _____ (1)

PS⊥ _____ (1)

2.2.2 If PT = 12 cm, then PR = _____ (1)

2.2.3 What type of a quadrilateral is PQRS? (1)

_____

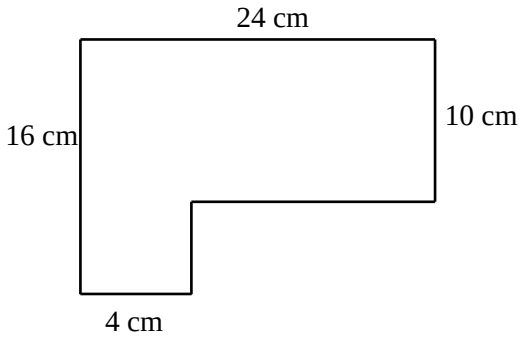
2.2.4 Classify △TPR according to its sides. (1)

_____

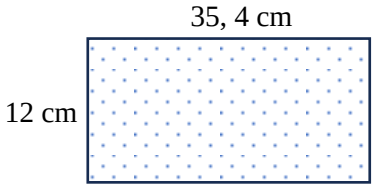
[7]

QUESTION 3 (AREA AND PERIMETER OF 2D SHAPES)

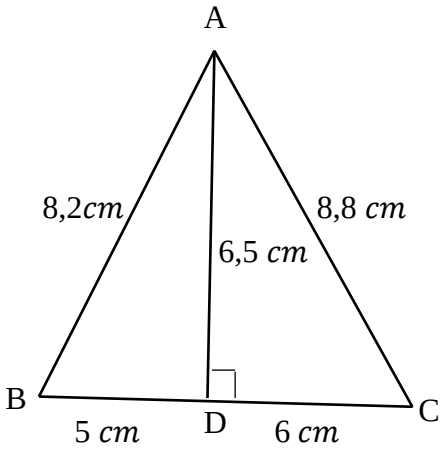
3.1 Calculate the perimeter of the composite shape. (3)



3.2 Calculate the area of the rectangle below. (3)



3.3 Calculate the area of $\triangle$ACD. (3)



[9]

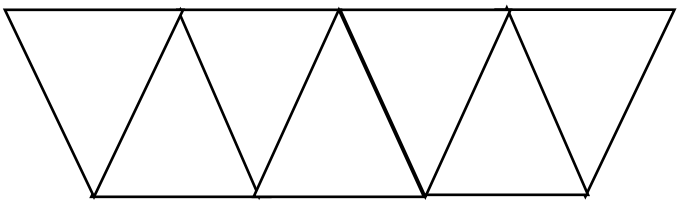
QUESTION 4 (SURFACE AREA AND VOLUME)

4.1 Convert: 7,2 m^2 = _____ cm^2 (1)

4.2 Find surface area of a rectangular prism if the length is 4 cm, the breadth is 3 cm and the height is 6 cm. (3)

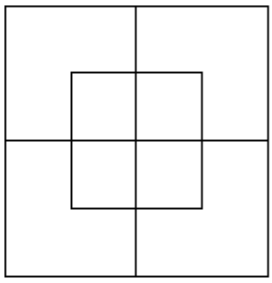
4.3 Sipho has 64 small cubes, with edges of 10 mm. He uses these cubes to build one big cube.
What is the volume of the big cube, in mm, if he uses all 64 small cubes? (3)

4.4 How many trapeziums of all sizes are there in the figure below? (1)



_____

4.5 How many squares of all sizes are there in the figure below? (1)

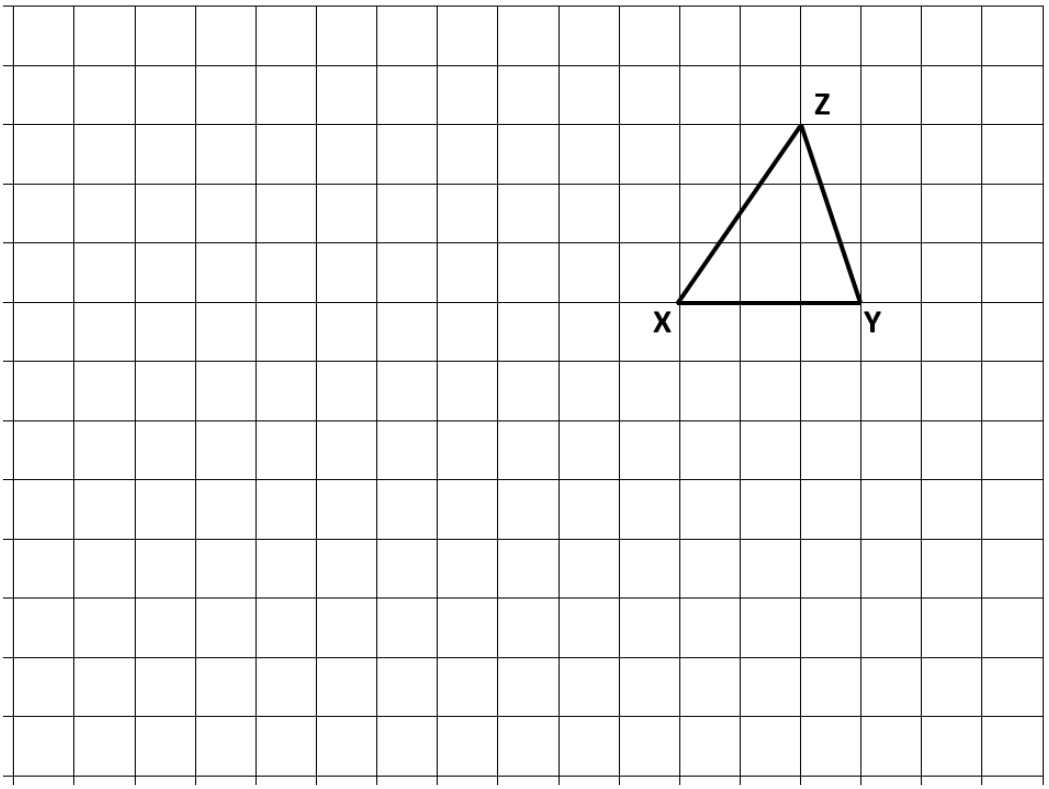


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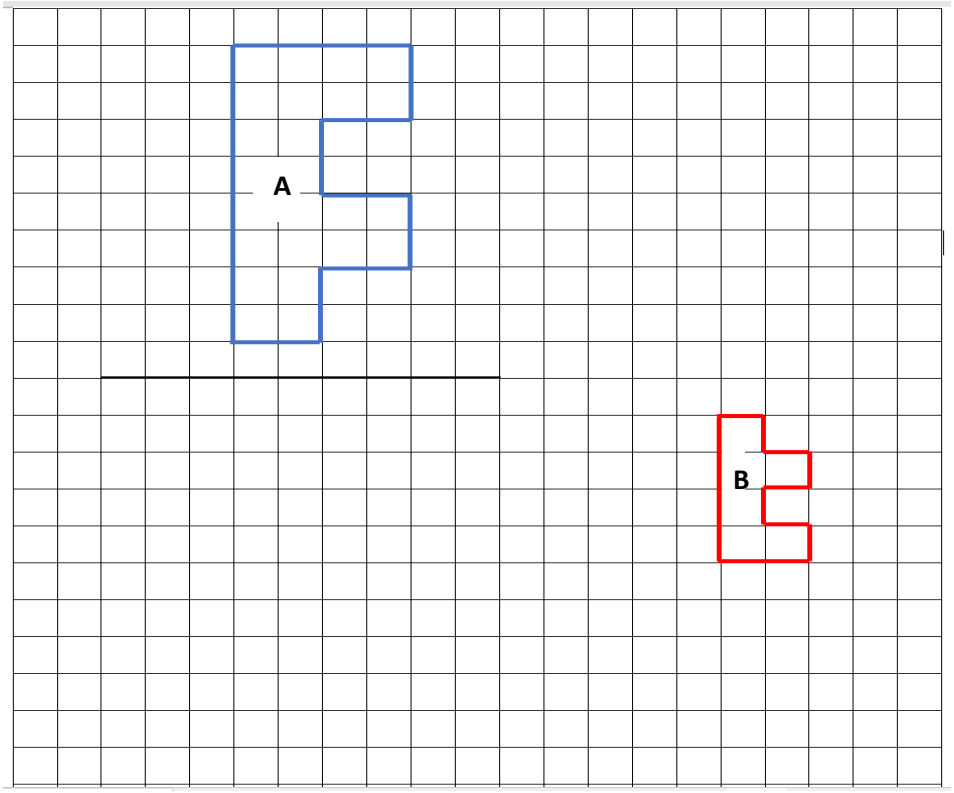
[9]

QUESTION 5 (TRANSFORMATION GEOMETRY)

5.1 Translate triangle XYZ seven units to the left and six units down. (2)



5.2 5.2.1 Draw the reflection of diagram A below the line of reflection. (1)



5.2.2 Describe in detail the transformation from diagram A to diagram B. (3)

[6]

QUESTION 6 (DATA HANDLING)

6.1 The data shows the scores for the marks in a Grade 7 Mathematics test. The test was out of a total of 30 marks.

20; 11; 17; 10; 10; 23; 13; 11; 14; 13; 17; 14; 24; 16; 14; 18; 17; 15; 26; 17

6.1.1 Draw a stem and leaf diagram for the above data. (2)

6.1.2 Calculate the range of the data. (1)

6.1.3 Calculate the mean of the data. (2)

6.1.4 Calculate the difference of the fractions of the learners who scored more than 40% and those that scored less than 40%. Write your answer in decimal form. (3)

[8]

TOTAL: 50