Grade 8	Bergvliet High School	November 2025
Time: 1 hour and 30 minutes	Mathematics	Marks: 60
Examiner: Mr D.Sinclair	**FINAL EXAM**	**Moderator: Mr S. Cooppan**

PAPER 2

Instructions:

- This Exam consists of **Six Questions**.
- **Answer all questions in the Answer book Provided.**
- **Do no write in the margins**
- Use black or blue ink only and no correctional fluid is permitted.
- Round off **ALL final answers** appropriately according to the given context, unless stated otherwise
- Please write neatly and legibly.
- This question paper consists of **7 pages** including the cover page
- You may use an approved scientific calculator (non – programmable and non – graphical) unless specified otherwise.

Useful Formulae:	$A = lb$	$A = s^2$	$A = \frac{1}{2}bh$	$A = \pi r^2$	$C = 2\pi r$	$V = lbh$
	$V = s^3$	$TSA = 6l^2$		$TSA = 2(lb + lh + bh)$		$TSA = bh + H(a + b + c)$
	$V = area\ of\ base \times height$					

Question 1

For each question four possible answers are given and only one is correct.

Select an answer and indicate your choice by writing the corresponding letter in the space provided.

1.1 The probability of rolling a 7 on a six-sided dice is: (1)

A) 1

B) 0

C) $\frac{1}{2}$

D) $\frac{1}{4}$

1.2 Complementary angles…..... (1)

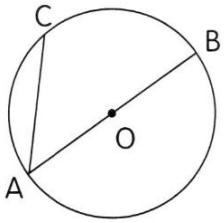
A) add ups to 180

B) are parallel

C) angles add up 90

D) are supplementary

1.3 Which of the following is the diameter? (1)



A) CA

B) BO

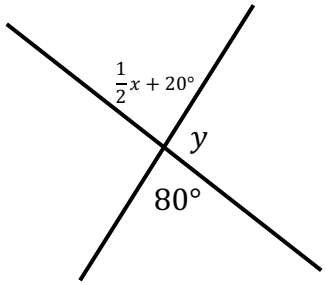
C) AO

D) AB

[3]

Question 2

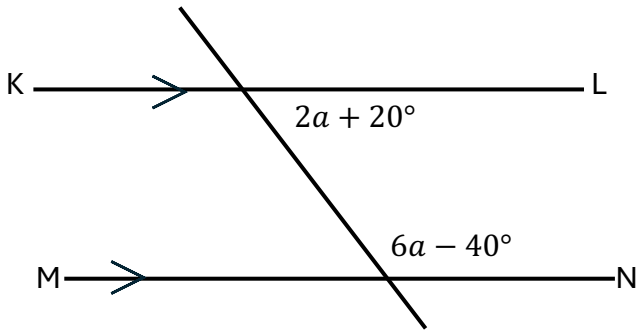
2.1 Given:



Determine the value of the unknown variables x and y , giving reasons for your answers.

(5)

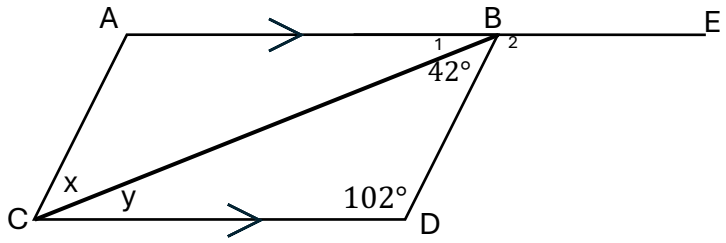
2.2 Study the figure below and answer the questions that follows.



Determine the value of a, giving a reason for your answer. (3)

2.3 Study the figure below and answer the questions that follow.

ABCD is a parallelogram with $C\hat{B}D = 42°$, $D = 102°$, $A\hat{C}B = x$ and $\hat{C}D = y$



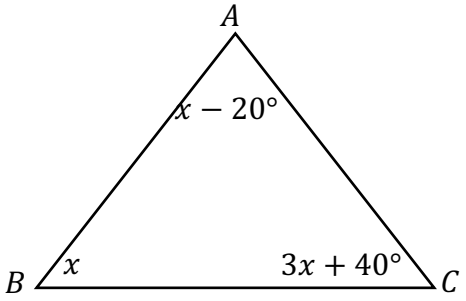
2.3.1 Determine the value of x with a reason. (2)

2.3.2 Calculate the value of B_2. Give a reason for your answer (2)

[12]

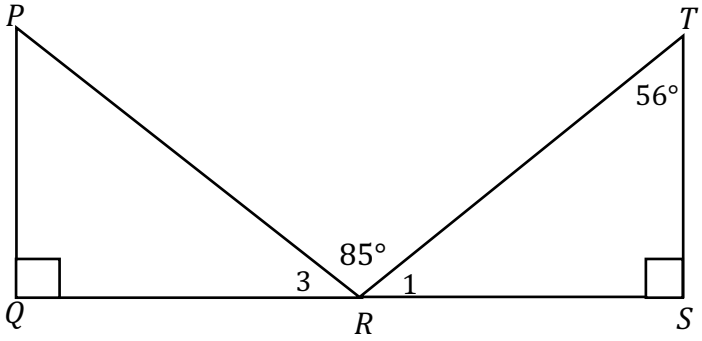
Question 3

3.1 Study the figure below and answer the question that follows.



Determine the value of x , giving a reason for your answer. (3)

3.2 In ΔPQR, $\widehat{Q} = 90°$. In ΔTRS , $\widehat{T} = 56°$ and $\widehat{S} = 90°$. $\hat{R}_2 = 85°$ and $R_3 = x$

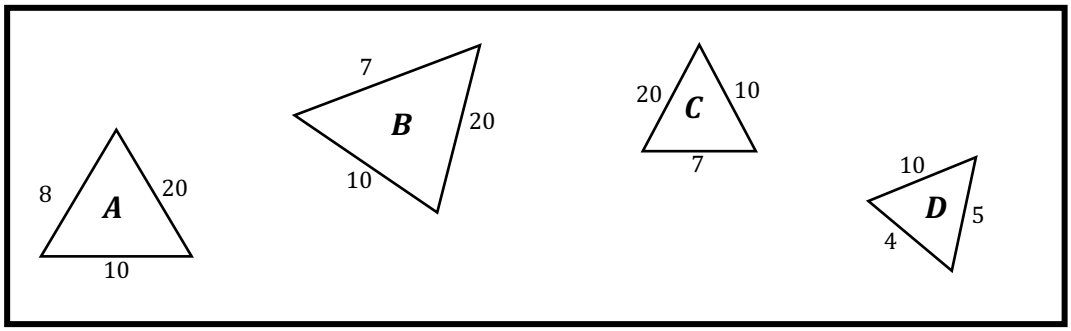


Calculate the calculate the value of x.

(4)

3.3 Identify which of the following triangles are congruent and similar.

Write your answer the space provided. Eg. Congruent : ΔF & ΔE

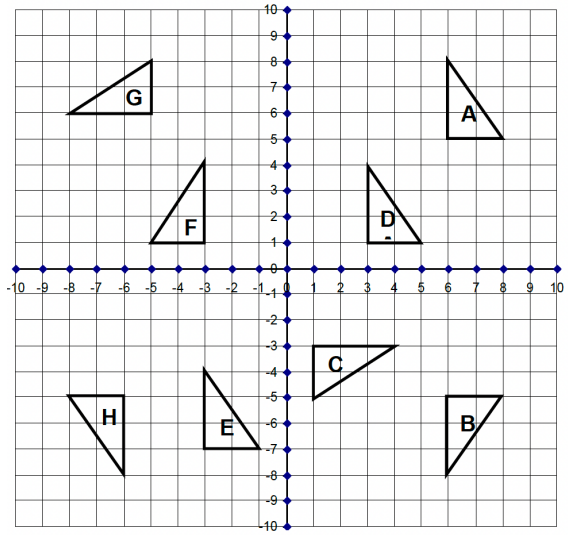


(2)

[9]

Question 4

Study the figure below and answer the questions that follow:



Use the graph to help fill in the table

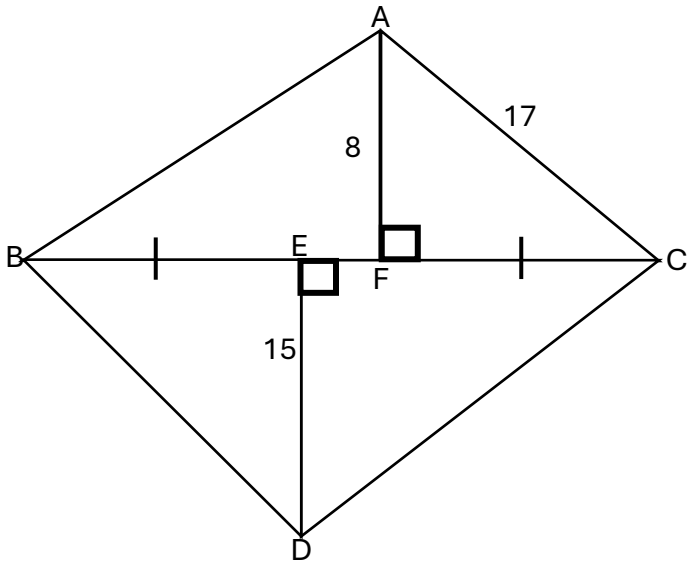
From	To	Describe the transformation
A	B	4.1
D	4.2	Translate 3 units right and 4 units up
F	4.3	Reflection over the y axis
E	D	4.4

[4]

Question 5

5.1 In $\Delta AFC, AF = 8cm$ and $AC = 17cm$.

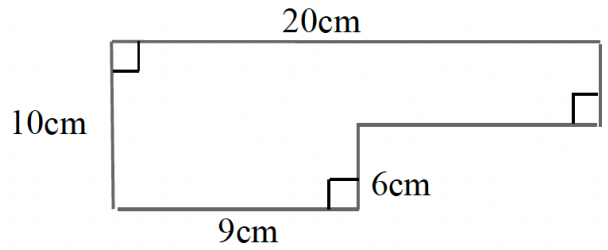
In $\Delta BDE, ED = 15cm$. $EF = \frac{1}{3}BE$ and $BE = FC$.



5.1.1 Calculate with reasons the length of FC. (3)

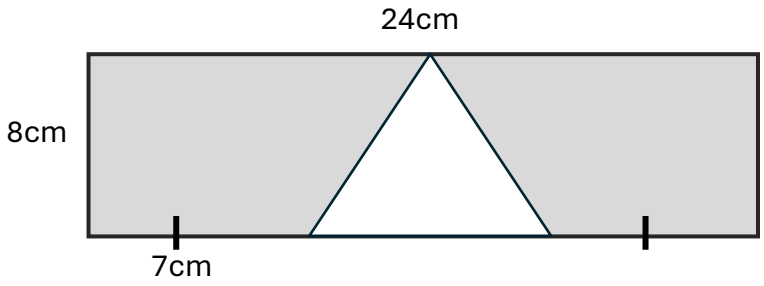
5.1.2 Determine the length of EF. Round your answer to nearest whole number (2)

5.2 Study the shape below and answer the questions that follow.



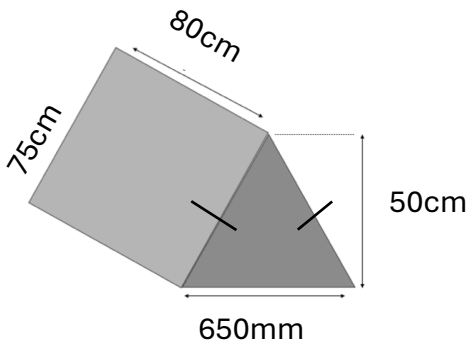
Calculate the perimeter of the shape. (2)

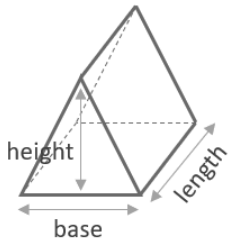
5.3 Calculate the area of the shaded region in the rectangle below.



(3)

5.4 Study the image below and answer the questions that follow.





5.4.1 Calculate the base of the triangular prism in cm. (2)

5.4.2 Determine the total surface area of the triangular prism. (4)

5.4.3 The prism is filled with sand. The price of sand is R0,20 per cm^3. Jeremy claims that he needs more than R27 000 to fill up the triangular container. Verify with calculations whether Jeremy is correct. (6)

[22]

Question 6

The following are the ages of learners who took part in the mathematics quiz at Sanlam.

17	13	15	16	13
15	13	13	14	14
13	16	17	14	14
12	12	13	13	17
17	14	15	13	12
10	18	12	11	15

6.1 Determine the mean of the data set. (Round to 1 Decimal Place) (2)

6.2 Calculate the mode of the data set (1)

6.3 Calculate the range of the data set (2)

6.4 Complete the table using the given class intervals on the diagram sheet provided. (3)

6.5 Determine the probability **(in percentage)** of someone that is 16 and older who participated in the mathematics quiz. (2)

[10]

Total Marks: [60]