Province of the
EASTERN CAPE
EDUCATION

NELSON MANDELA DISTRICT

Name & Surname: .....

GRADE 8

MATHEMATICS
PAPER 2

NOVEMBER 2024

MARKS: 60

TIME: 1,5 hours

This test consists of 9 pages excluding the cover page.

INSTRUCTIONS:

1. Read all the instructions carefully.
2. Question 2 consists of **FIVE** multiple choice questions. Simply circle the correct letter.
3. Answer Questions 3 - 5 in the spaces or boxes provided.All working must be shown.
4. Write neatly and legibly.
5. Approved scientific calculators (non-programmable and non-graphical) may be used unless instructed otherwise.
6. Unless stated, diagrams are not drawn to scale.

SECTION A

QUESTION 1

Choose the letter from Column B that best describes the term in Column A.

	Column A
1.1	Rectangle
1.2	Kite
1.3	Perimeter
1.4	Vertically opposite
1.5	Equilateral Triangle

	Column B
A	The distance measured around a 2D shape.
B	A triangle of which all sides are equal.
C	The angles formed when two straight lines cross each other.
D	A closed 2D shape that has two equal, adjacent short sides; two equal adjacent longer sides and two opposite angles that are equal.
E	A triangle with base angles equal.
F	Angles on either side of a set of parallel lines.
G	A closed 2D shape that has the opposite sides equal and parallel and the internal angles equal to ninety degrees.

Now simply write your answer in the table provided below.

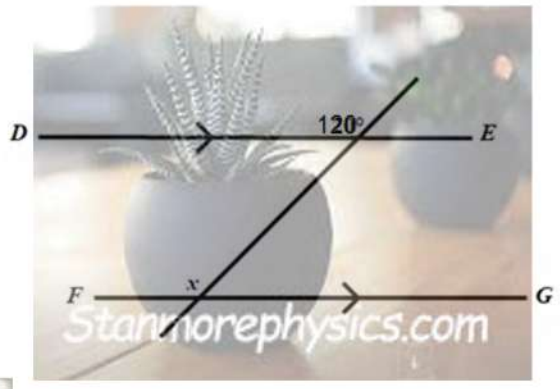
1.1	
1.2	
1.3	
1.4	
1.5	

[5]

QUESTION 2

Study the following and, in each case, simply circle the correct response:

2.1 If DE // FG, then the value of x is:



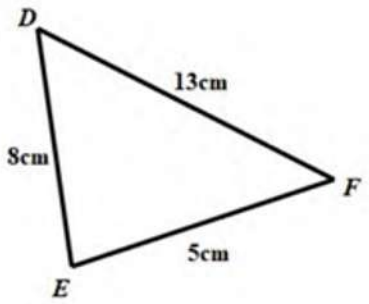
A $x = 30°$

B $x = 160°$

C $x = 70°$

D $x = 120°$

2.2 Triangle DEF is not drawn to scale. Which statement is true for triangle DEF?



A It is a scalene triangle

B It is a right-angled triangle

C It is an isosceles triangle

D It is an obtuse triangle

2.3 The complement of 23 degrees would be…..

A $x = 23°$

B $x = 67°$

C $x = 77°$

D $x = 157°$

2.4 If lines AB and CD are parallel, the co-interior angles are ……

A Supplementary

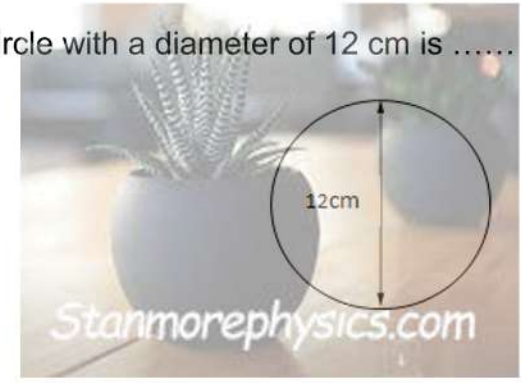
B Complementary

C Equal

D Less than 90 degrees

2.5 The radius of a circle with a diameter of 12 cm is ……

A 144 cm
B 75,41 cm
C 24 cm
D 6 cm



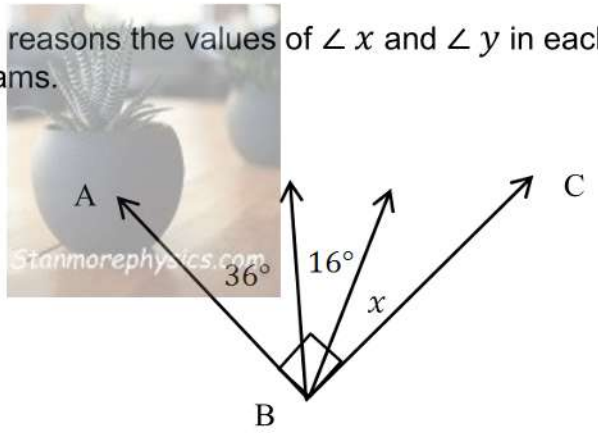
[5]

SECTION B

QUESTION 3

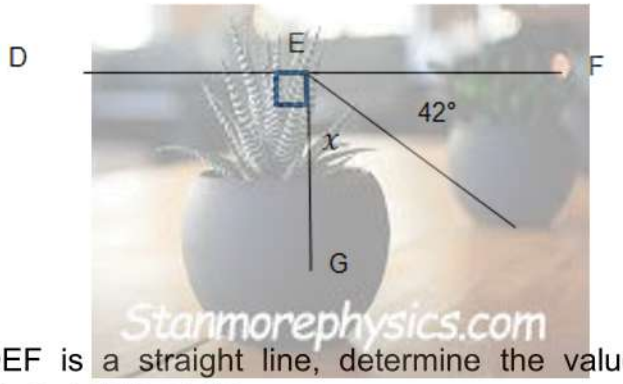
3.1 Determine with reasons the values of $\angle x$ and $\angle y$ in each of the following diagrams.

3.1.1



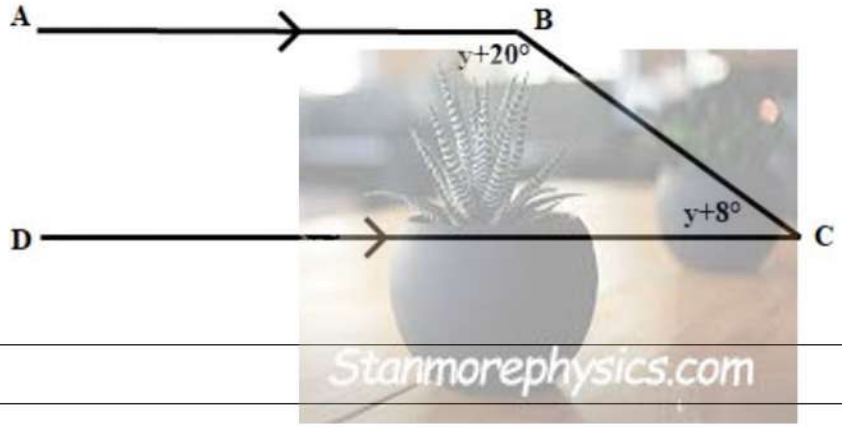
(3)

3.1.2



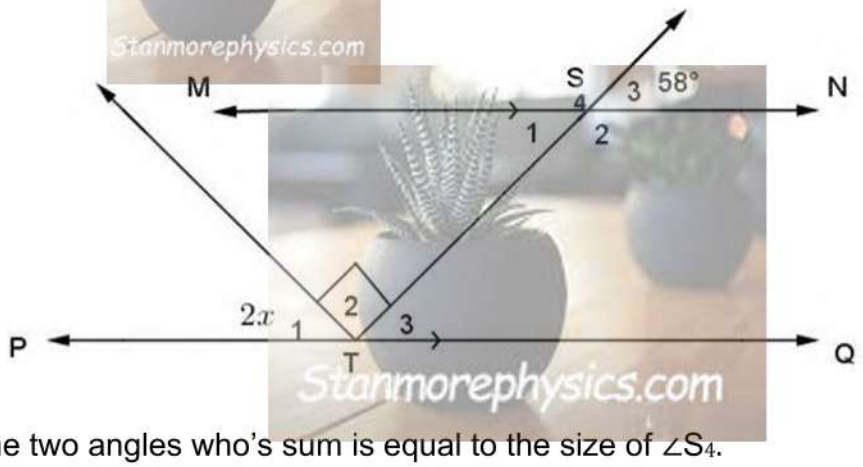
Given that DEF is a straight line, determine the value of x. Give reasons for all your statements. (3)

3.1.3



(3)

3.1.4 Study the diagram below and answer the questions that follow:



(a) Name two angles who's sum is equal to the size of $\angle S_4$. (2)

(b) Determine, with reasons, the size of the following angles: (7)

$\angle S_1$ =

$\angle T_3$ =

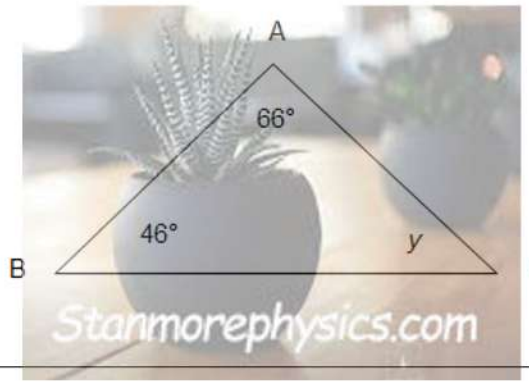
Value of x =

[18]

QUESTION 4

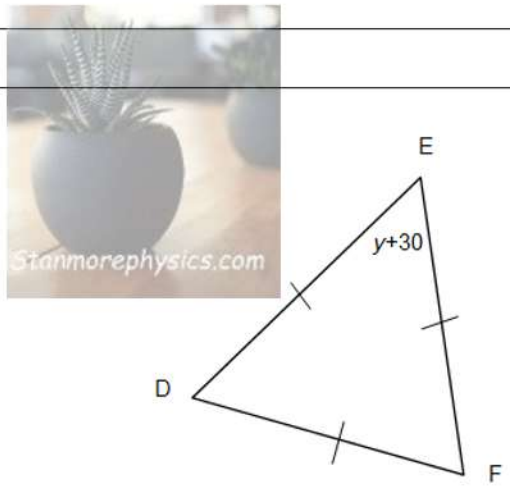
Determine the size of the ∠y in each of the following:

4.1



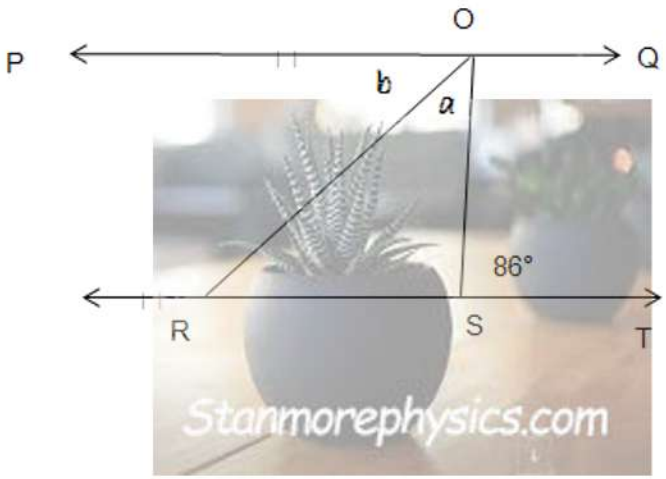
(3)

4.2



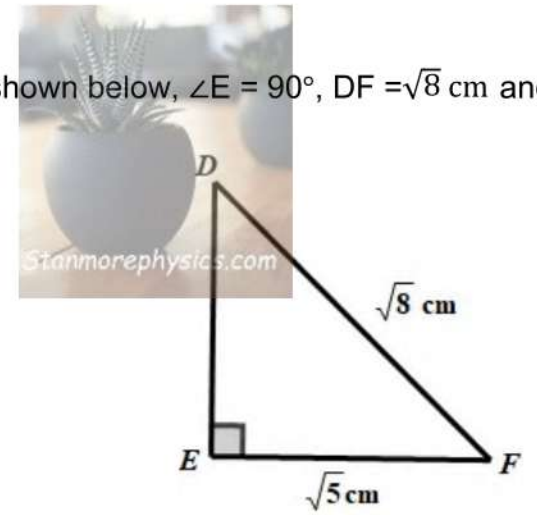
(4)

4.3 In the sketch below, PQ //RT and ∠ORS and ∠SOR are equal. Use the information provided in the sketch to determine the values of a and b in the following sketch:



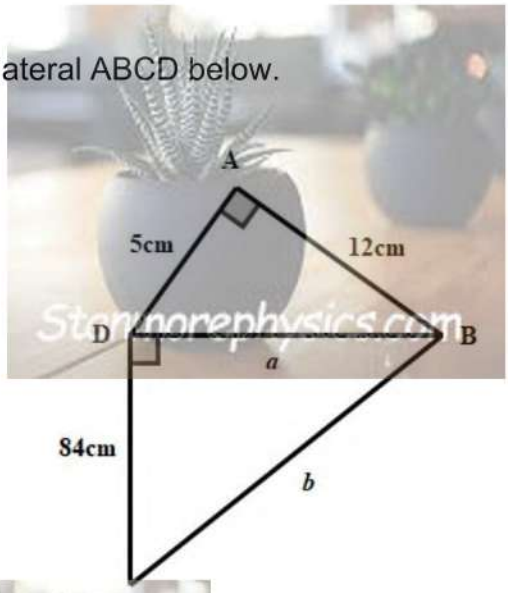
(7)

4.4 In △DEF shown below, ∠E = 90°, DF = $\sqrt{8}$ cm and EF = $\sqrt{5}$ cm.



Determine the length of DE, showing all your working. Leave your answer in surd form. (4)

4.5 Consider quadrilateral ABCD below.

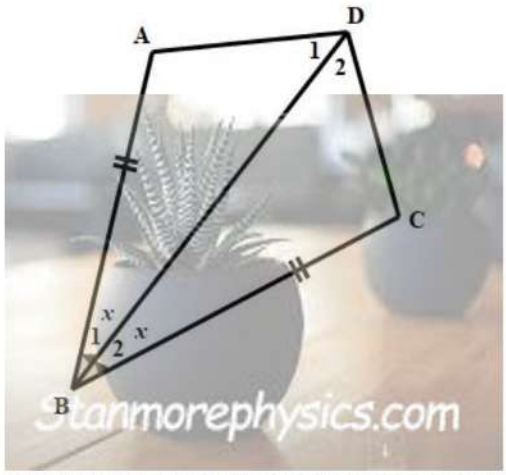


Calculate the length of *b* (5)

[23]

QUESTION 5

5.1 The diagram consists of two congruent triangles. Complete:

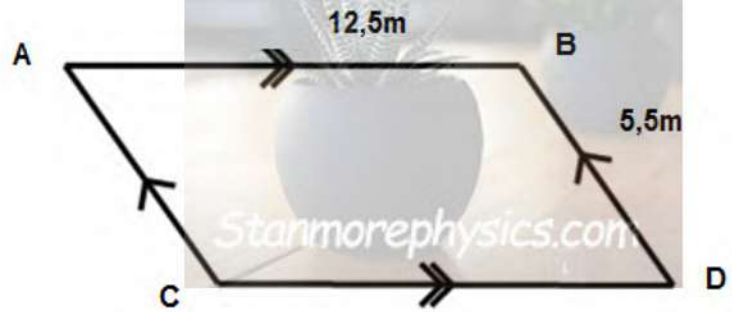


ΔBCD ≡ Δ……...

Angles that are equal:……

Sides that are equal:…….. (3)

5.2 The sketch below shows the dimensions of Stella's garden. She needs to fence the garden in order to keep the dogs safe.



5.2.1 What type of quadrilateral is represented here? (1)

_____

5.2.2 Calculate the perimeter of the shape above. (2)

_____

_____

5.2.3 The fencing only comes in 12m rolls at R150 per roll. How much would she pay to purchase the fencing for the garden? (3)

_____

_____

_____

_____

_____

_____

[9]

TOTAL: 60