

2D Shapes

Please write clearly in block capitals

Forename:

Surname:

Materials

For this paper you must have:

- mathematical instruments



You **can** use a calculator.

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer all questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information

- The marks for questions are shown in brackets.
- You may ask for graph paper, tracing paper and more answer paper. These must be tagged securely to this answer book.

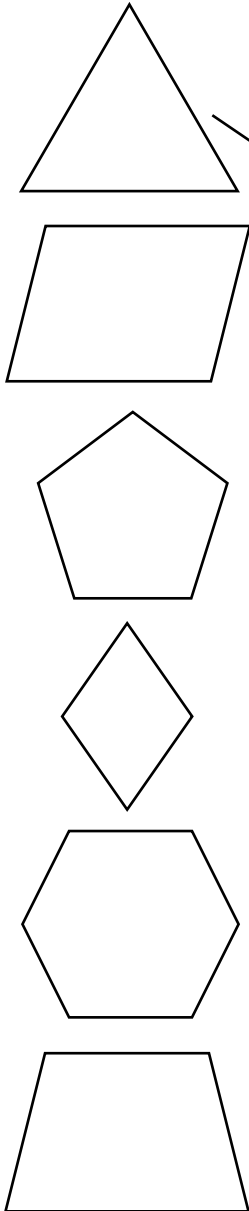
Advice

- In all calculations, show clearly how you work out your answer.

- 1 Below is a list of shapes and their names.
Match each shape to the correct name.
The first one has been done for you.

(Level 3)

[5 marks]



Pentagon

Hexagon

Triangle

Trapezium

Parallelogram

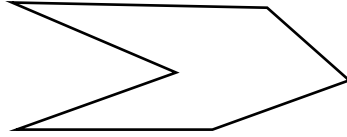
Rhombus

Turn over for next question

2 Three irregular shapes are shown below:

(Level 3)

2(a) Circle the number of sides and the name of the following shape:



[1 mark]

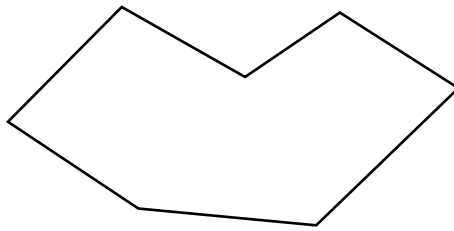
5-sided pentagon

6-sided pentagon

5-sided hexagon

6-sided hexagon

2(b) Circle the number of sides and the name of the following shape:



[1 mark]

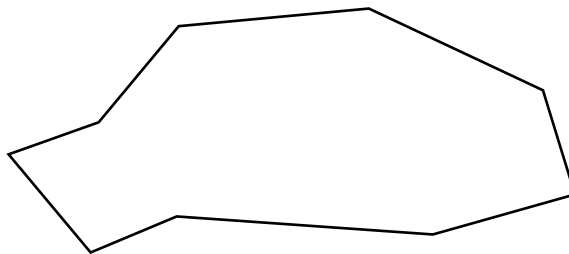
6-sided hexagon

7-sided heptagon

6-sided heptagon

7-sided hexagon

2(c) Circle the number of sides and the name of the following shape:



[1 mark]

7-sided heptagon

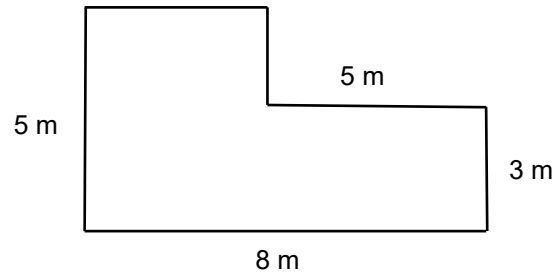
9-sided nonagon

8-sided octagon

10-sided decagon

- 3 The diagram below shows a garden.
All the corners meet at a right angle

(Level 3)



Determine the area of the garden.

You **must** show your working

[3 marks]

Answer _____

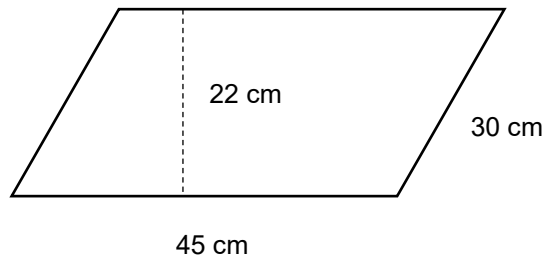


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- 4 An advertising company designs a poster in the shape of a parallelogram. (Level 3)
The client wants the poster to have a uniform bright background colour to be applied.



Calculate the area that needs to be covered.

You **must** show your working.

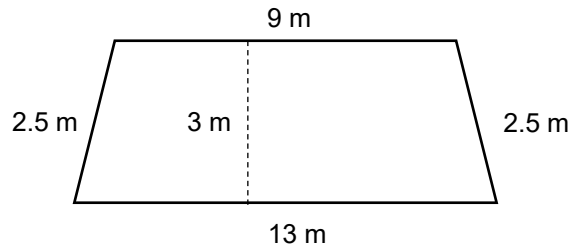
[2 marks]

Answer _____

Turn over for next question

- 5** The diagram below shows the a plan for the floor of a warehouse.

(Level 3)



- 5(a)** Calculate the area of the warehouse floor

[3 marks]

Answer _____

- 5(b)** The warehouse owner has two identical warehouses.

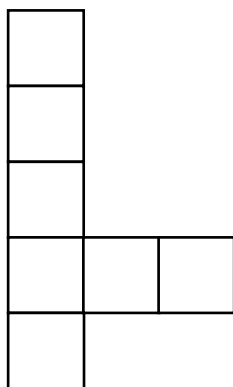
How much would it cost to buy tiles to cover the floor of both warehouses, given that the tiles selected cost £25 *per* m^2 ?

[2 marks]

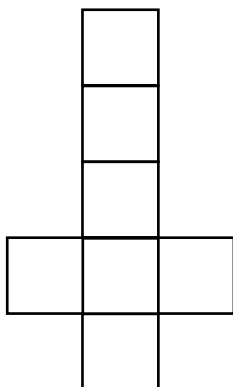
Answer _____

6 Consider the nets A, B, C and D.

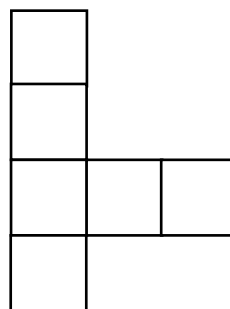
(Level 3)



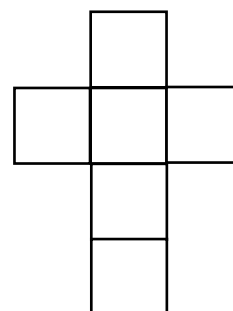
A



B



C



D

6(a) Which net will properly form a cube with a lid?

[1 mark]

6(b) Explain why each of the other nets will not form a cuboid with a lid?

[3 marks]



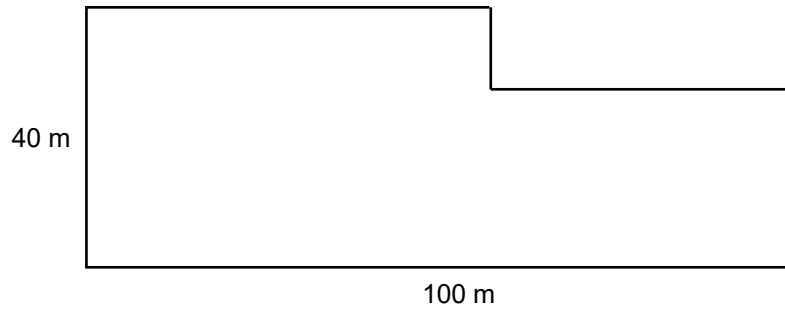
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- 7** A farmer has a house that sits at the edge of a field, with all sides meeting at right angles. (Level 3)

The field has the following measurements.



- 7(a)** The farmer wants to know how much fencing he will need to surround the field. [3 marks]
Calculate the total length of fencing.

Answer _____ m

- 7(b)** If the fence costs £5 per metre, determine the cost of fencing the entire field. [1 mark]

Answer: £ _____

End of Questions