JP Maths Revision

Attempt the paper before watching the solutions https://www.youtube.com/@JPMathsRevision

Foundation / Higher Tier

Perimeter and area

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working.**
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

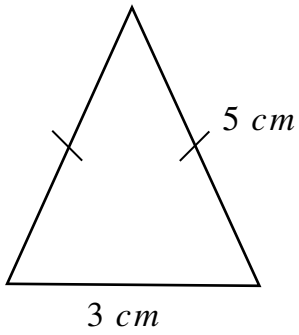
- The marks for **each** question are shown in brackets- *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

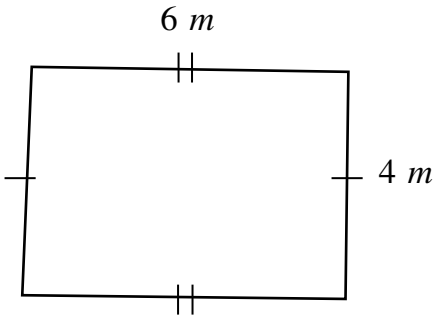
1. Work out the perimeter of the following 2D shapes:

Include units with your answer.



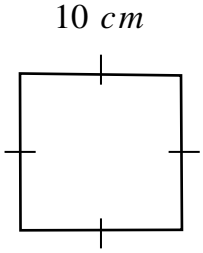
13cm

(1)



20m

(1)



40cm

(1)

(Total for Question 1 is 3 marks)

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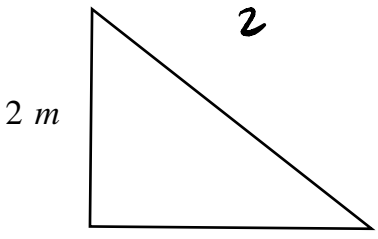
2. Work out the area of the following 2D shapes:

Include units with your answer.

$2 \times 5 = 5$

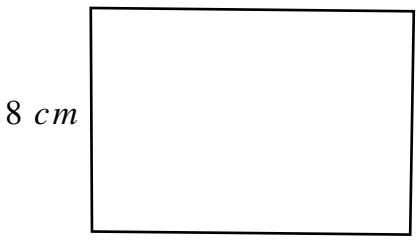
$\frac{}{2}$



$5m^2$

(1)

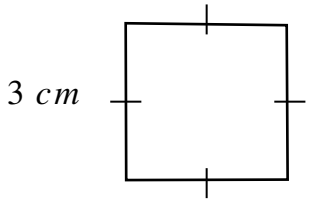
8×12



$96cm^2$

(1)

3×3



$9cm^2$

(1)

(Total for Question 2 is 3 marks)

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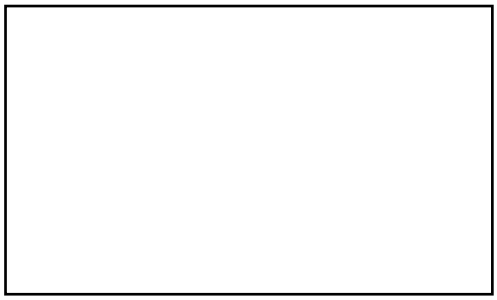
3. A rectangle has area 72 cm^2 and width 8 cm.

Find its length.

$72 \div 8 = 9$



9 cm

(Total for Question 3 is 2 marks)

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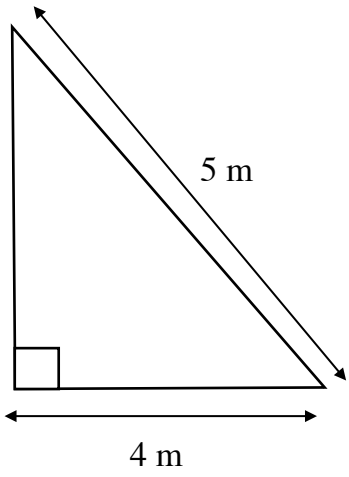
4. Find the area of the below triangle

$\sqrt{5^2 - 4^2} = 3$

$\frac{3 \times 4}{2} =$



6 m^2

(Total for Question 4 is 3 marks)

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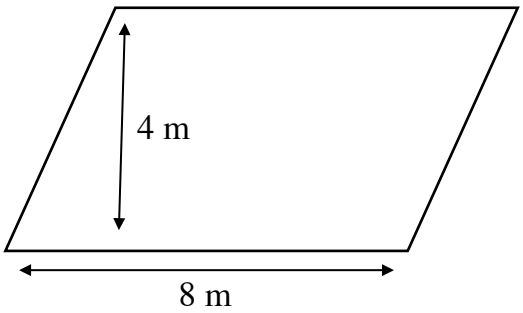
5. Find the area of the below parallelogram

$4 \times 8 = 32$



32 m^2

(Total for Question 5 is 2 marks)

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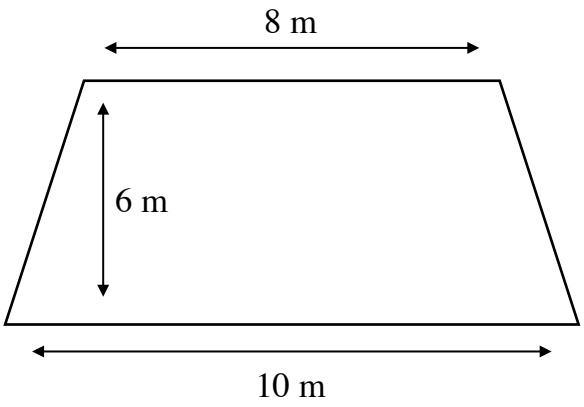
6. Find the area of the below trapezium



8+10=18

18÷2=9

9×6=54

54 m²

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(Total for Question 6 is 2 marks)

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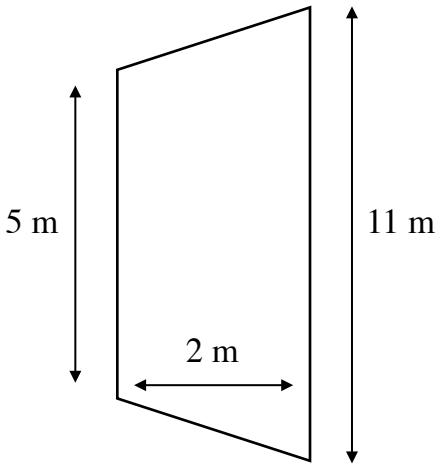
7. Find the area of the below trapezium



5+11=16

16÷2=8

8×2=16

16 m²

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(Total for Question 7 is 2 marks)

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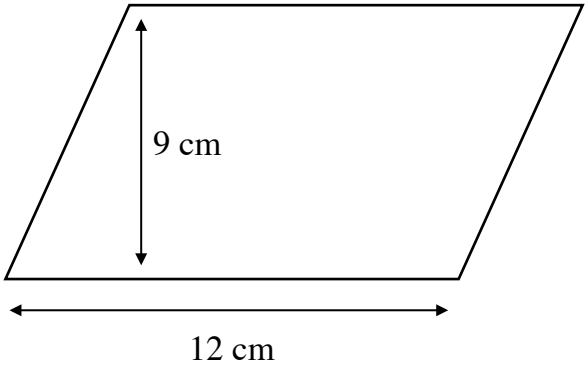
8. Find the area of the below parallelogram

9×12=108



108 cm²

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(Total for Question 8 is 2 marks)

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9. A rectangle has area 96 cm² and length 12 cm.

Find the width.

$96 \div 12 = 8$

8 cm

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(Total for Question 9 is 2 marks)

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10. A triangle has area 40 cm² and base 10 cm.

Find the height.

$A = \frac{1}{2} b \times h$

$40 = \frac{1}{2} \times 10 \times h$

$40 = 5h$

$h = 8$

8 cm

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(Total for Question 10 is 2 marks)

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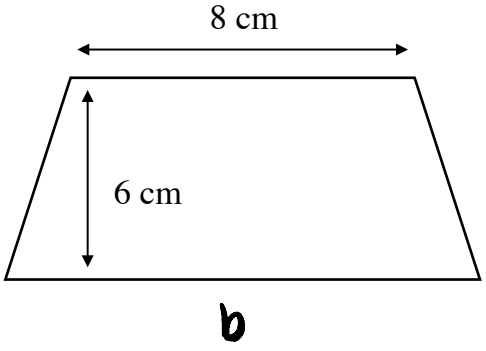
11. A trapezium has area 60 cm², height 6 cm, and one parallel side of 8 cm.

Find the length of the other parallel side.



$A = \frac{1}{2}(a+b) \times h$

$60 = \frac{1}{2}(8+b) \times 6$

$10 = \frac{1}{2}(8+b)$

$20 = 8+b$

$b = 12$

12 cm

.....

(Total for Question 11 is 3 marks)

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12. A garden is a rectangle measuring 15 m by 9 m.

Fencing is placed all the way around the garden.

Find the total length of fencing needed.

$P = 15 \times 2 + 9 \times 2$

$= 30 + 18$

$= 48$

48 m

(Total for Question 12 is 2 marks)

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13. A rectangular floor is 8 m long and 5 m wide.

Each square tile covers 3 m^2.

How many tiles are needed to cover the floor?

$8 \times 5 = 40 m^2$

$40 \div 3 = 13 \cdot 3$

14 needed

14

(Total for Question 13 is 2 marks)

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14. A triangular field has base 21 m and perpendicular height 12 m.

1 bag of grass seed covers 10 m^2.

Each bag costs £2.50.

What is the total cost of covering the field?

Area $= \frac{1}{2} \times 12 \times 21$

$= 126 m^2$

$126 \div 10 = 12 \cdot 6$

13 bags needed

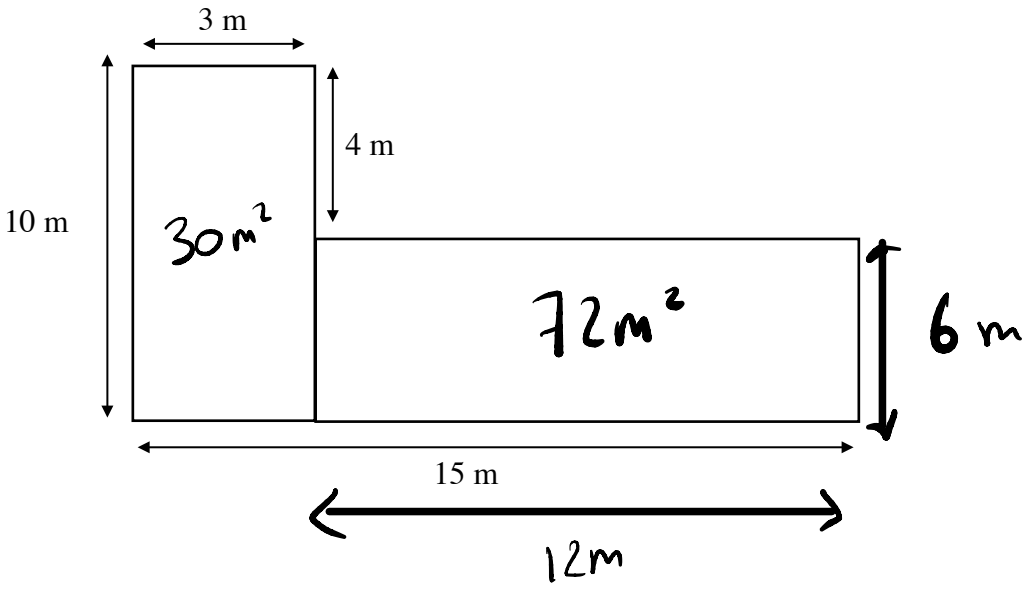
$13 \times 2 \cdot 50 = £32 \cdot 50$

£ 32·50

(Total for Question 14 is 3 marks)

15. A shape is made from two rectangles:

Find the total area.



30 + 72 = 102

102 m²

(Total for Question 15 is 2 marks)

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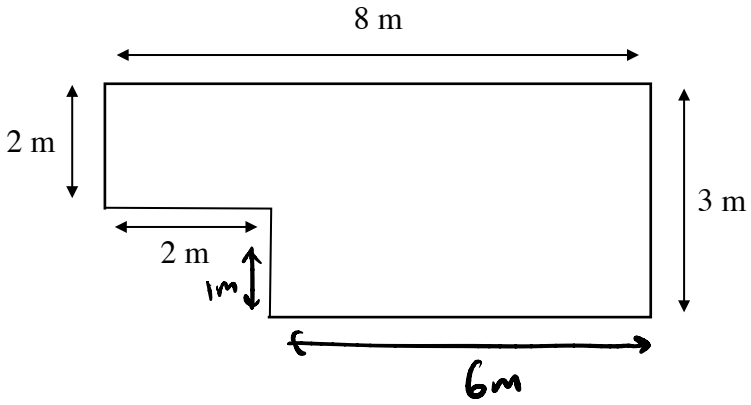
16. Find the perimeter of this compound shape:



8 + 3 + 6 + 1 + 2 + 2

= 22m

22 m

(Total for Question 16 is 2 marks)
