Name:

Exam Style Questions

Area: Compound Shapes

Corbettmaths

Ensure you have: Pencil, pen, ruler, protractor, pair of compasses and eraser

You may use tracing paper if needed

Guidance

1. Read each question carefully before you begin answering it.
2. Don't spend too long on one question.
3. Attempt every question.
4. Check your answers seem right.
5. Always show your workings

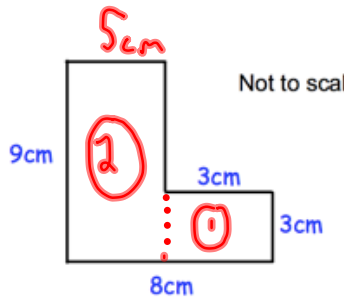
Revision for this topic

www.corbettmaths.com/contents

Video 41

Video 42

1.



(1) $3 \times 3 = 9\text{cm}^2$

(2) $9 \times 5 = 45\text{cm}^2$

$45 + 9 = 54\text{cm}^2$

Calculate the area of the shape.

54 .....cm²

(3)

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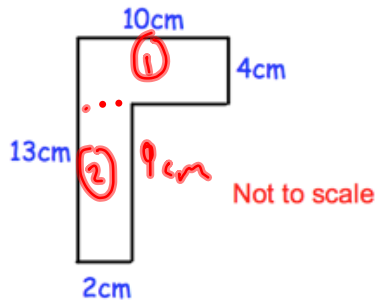
2. Shown is an L shape.



(1) $10 \times 4 = 40\text{cm}^2$

(2) $9 \times 2 = 18\text{cm}^2$

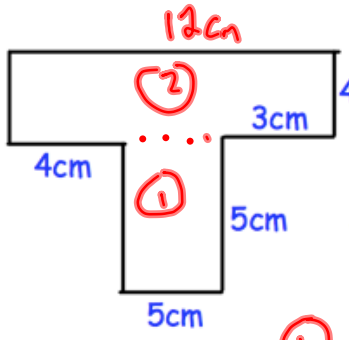
$40 + 18 = 58\text{cm}^2$

Calculate the area of the shape.

58 .....cm²

(3)

3.



Not drawn accurately

Calculate the area of the shape.

1) $5 \times 5 = 25\text{cm}^2$

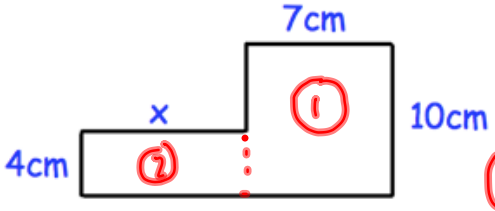
2) $12 \times 4 = 48\text{cm}^2$

$48 + 25 = 73$

73 .....cm²

(3)

4.



The area of the compound shape is 106cm².
Work out the size of x.

1) $7 \times 10 = 70\text{cm}^2$

2) $4 \times x = 4x$

$70 + 4x = 106$

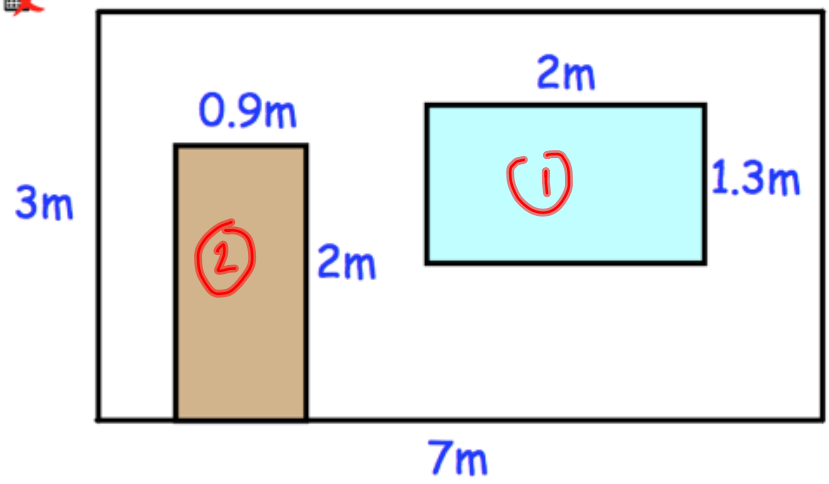
$4x = 36$

$x = 9$

9 .....cm

(3)

5. Connor is painting the front of his house.



The tin of paint he has can cover 16m².

Will he have enough paint?
You **must** show your workings.

wall: $3 \times 7 = 21$

①: $2 \times 1.3 = 2.6$

②: $2 \times 0.9 = 1.8$

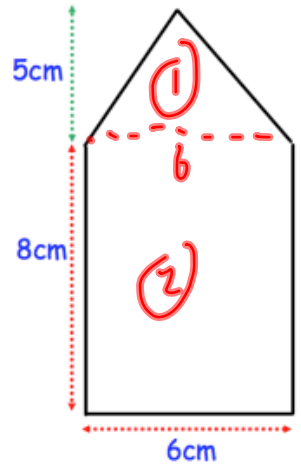
$21 - 2.6 - 1.8$

$= 16.6 m^2$

No, he will need more paint as he needs to paint $16.6 m^2$ and has enough paint to cover only $16 m^2$.

(4)

6.



(1) $\frac{1}{2} \times 6 \times 5 = 15 cm^2$

(2) $8 \times 6 = 48 cm^2$

$48 + 15 = 63 cm^2$

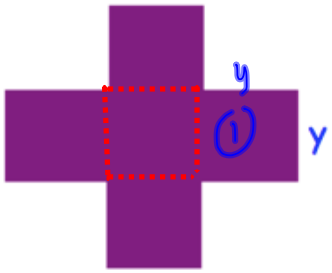
Calculate the area of the shape above.

63

.....cm²

(3)

7. The shape below is made from five identical squares.



The area of the shape is 180cm².

Work out the length of side y.

Area $5y^2 = 180$

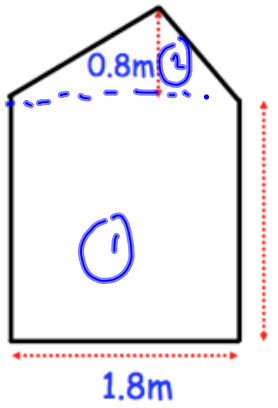
$y^2 = 36$

$y = 6$

.....6.....cm

(3)

8.



Not drawn
to scale

The diagram represents the side view of a shed with a sloping roof.
Calculate the area of the side view of the shed.
Give your answer to an appropriate degree of accuracy.

(1) $2.1 \times 1.8 = 3.78\ m^2$

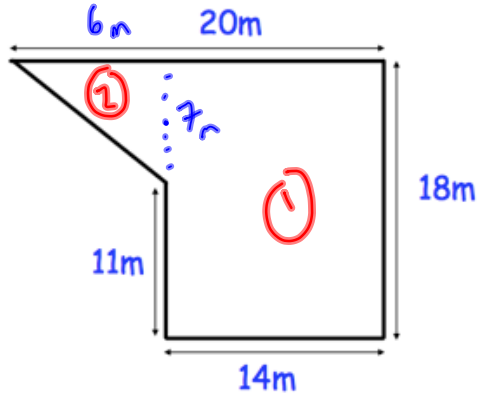
(2) $\frac{1}{2} \times 1.8 \times 0.8 = 0.72 m^2$

$3.78 + 0.72 = 4.5$

4.5 ..... m^2

(3)

9. Shown is the plan of a small field.



Thomas is going to keep some chickens in the field.
Each chicken needs 5m².

Work out the greatest number of chickens Thomas can keep in the field.

(1) $14 \times 18 = 252 m^2$

(2) $\frac{1}{2} \times 6 \times 7 = 21 m^2$

$252 + 21 = 273 m^2$

$273 \div 5 = 54.6$

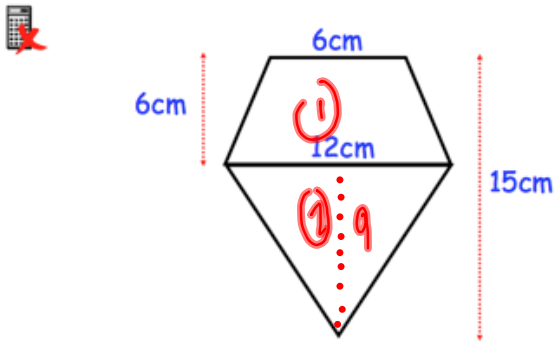
54 chickens

54

.....

(5)

10. Bea makes a logo for a club in school.



Work out the area of the logo.

(1) $\frac{1}{2}(6+12)\times 6 = 54\,cm^2$

(2) $\frac{1}{2}\times 12\times 9 = 54\,cm^2$

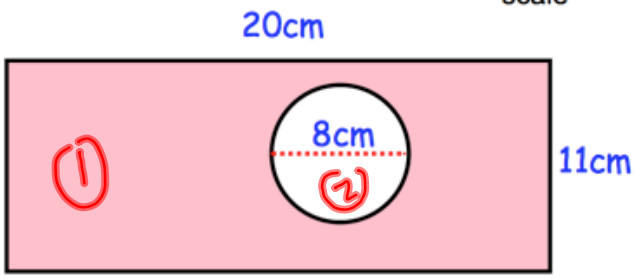
108

.....cm²

(4)

11. The diagram shows a rectangle with a circle cut out.

Not drawn to scale



The rectangle has length 20cm and width 11cm.
The circle has diameter 8cm.

Work out the shaded area.
Give your answer correct to 2 decimal places.

(1) $20 \times 11 = 220 cm^2$

(2) $\pi \times 4^2 = 16\pi cm^2 = 50.265...$

$220 - 50.265.. = 169.734...$

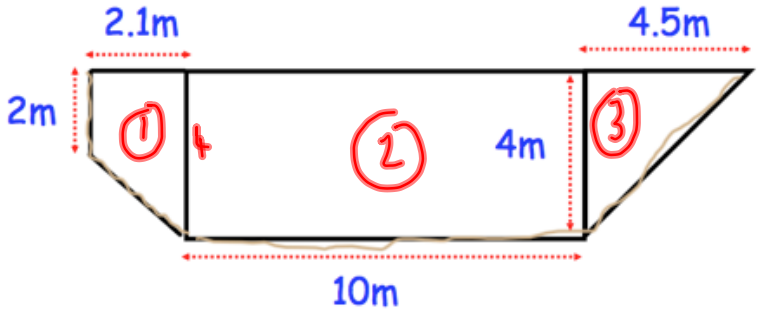
169.73

.....cm²

(4)

12. Shown is a cross-section of a river.

Not drawn to scale



Calculate an estimate of the area of the cross section by considering the trapezium, rectangle and triangle.

(2) $4 \times 10 = 40 m^2$

(1) $\frac{1}{2}(2+4) \times 2.1 = 6.3 m^2$

(3) $\frac{1}{2} \times 4 \times 4.5 = 9 m^2$

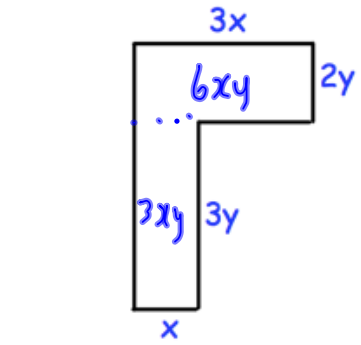
$40 + 6.3 + 9 = 55.3$

55.3

.....m²

(6)

13. Shown is an L shape.



All measurements are in centimetres.
Find an expression for the area of the L shape.

$6xy + 3xy = 9xy$

$9xy$ ..... cm^2

(3)