Compound Shapes

REVISE THIS TOPIC

1 Here is a shape made from rectangles.

3 cm

A 4

8

Not drawn accurately

10 cm

B 6 cm

11 cm
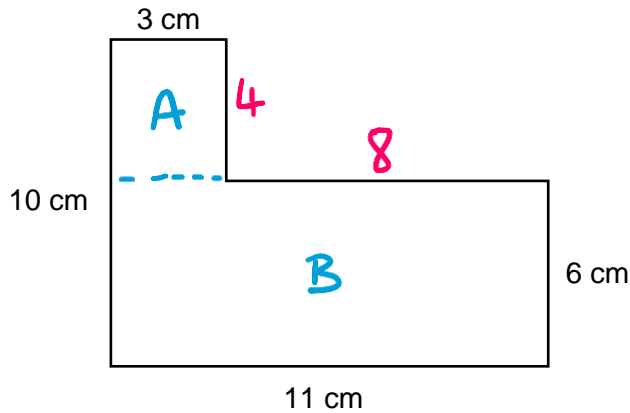
1 (a) Work out the perimeter of the shape **[2 marks]**

$$10 + 3 + 4 + 8 + 6 + 11 = 42$$

Answer _____ 42 _____ cm

1 (b) Work out the area of the shape **[3 marks]**

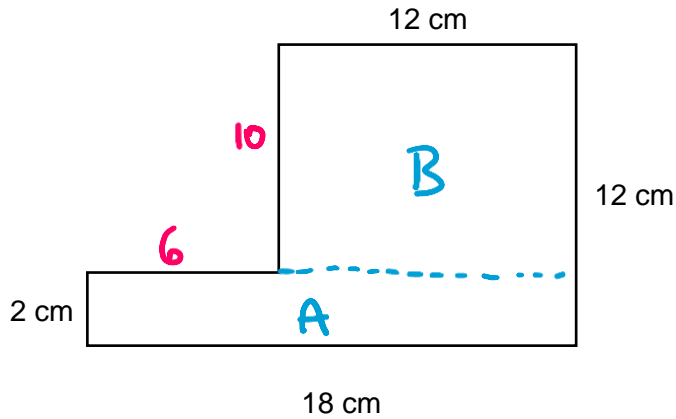A : $3 \times 4 = 12 \text{ cm}^2$

B : $11 \times 6 = 66 \text{ cm}^2$

$$12 + 66 = 78$$

Answer _____ 78 _____ cm²

5

2 Here is a shape made from rectangles.

12 cm

Not drawn accurately

10

B

12 cm

6

2 cm

A

18 cm

2 (a) Work out the perimeter of the shape **[2 marks]**

$$2 + 18 + 12 + 12 + 10 + 6$$

Answer _____ 60 _____ cm

2 (b) Work out the area of the shape **[3 marks]**

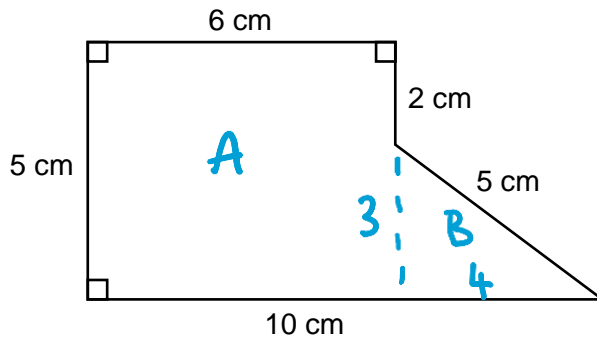A: $2 \times 18 = 36 \text{ cm}^2$

B: $10 \times 12 = 120 \text{ cm}^2$

$$120 + 36$$

Answer _____ 156 _____ cm²

3   Here is a pentagon.

6 cm

2 cm

Not drawn
accurately

5 cm

A

5 cm

3   *B*

4

10 cm

3 (a)   Work out the perimeter of the pentagon.   **[2 marks]**

$$5 + 6 + 2 + 5 + 10 = 28$$

Answer _____ 28 _____ cm

3 (b)   Work out the area of the pentagon.   **[3 marks]**

$$A: \quad 6 \times 5 = 30 \, cm^2$$
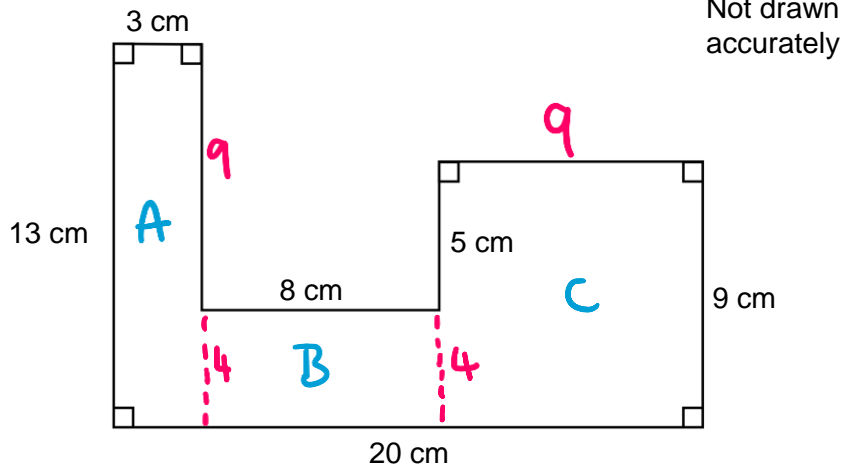
$$B: \quad \tfrac{1}{2} \times 4 \times 3 = 6 \, cm^2$$

$$30 + 6 = 36$$

Answer _____ 36 _____ cm²

10

Turn over ▶

4   Here is a shape made from rectangles.

3 cm

Not drawn accurately

9

9

A

13 cm

5 cm

8 cm

C

9 cm

4

B

4

20 cm

4 (a)   Work out the perimeter of the shape.   **[3 marks]**

$$13 + 3 + 9 + 8 + 5 + 9 + 9 + 20$$

Answer _____ **76** _____ cm

4 (b)   Work out the area of the shape.   **[4 marks]**

A: $13 \times 3 = 39 \, cm^2$
B: $8 \times 4 = 32 \, cm^2$
C: $9 \times 9 = 81 \, cm^2$

Answer _____ **152** _____ cm²

5   Here is a shape made from a trapezium and a rectangle.

8 cm

Not drawn accurately

S

B

7 cm

14

2

A

2 cm

14 cm
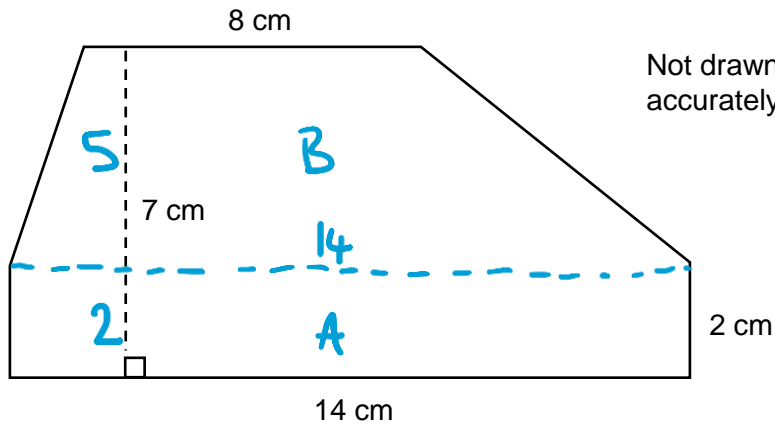
Work out the area of the shape.   **[4 marks]**

$$A: 14 \times 2 = 28 \text{ cm}^2$$
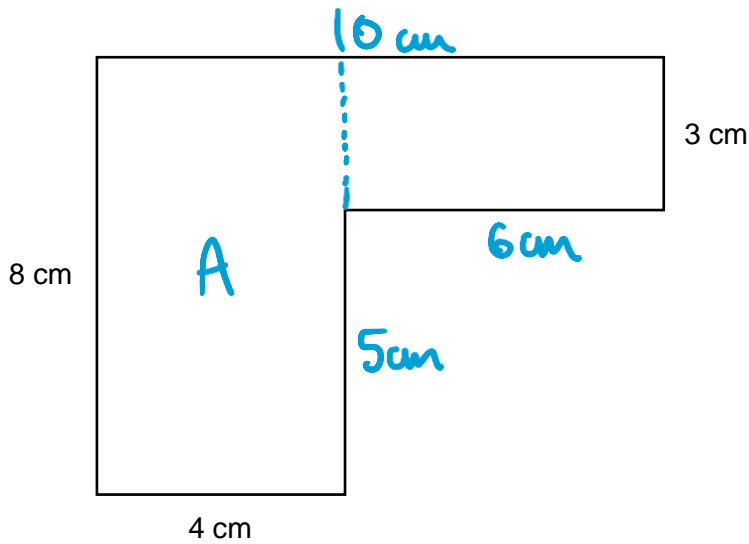$$B: \tfrac{1}{2}(14+8) \times 5 = 55 \text{ cm}^2$$

$$55 + 28 = 83$$

Answer _____ 83 _____ cm²

11

Turn over ▶

6   Here is a shape made from rectangles.

10 cm

3 cm

8 cm   A

6 cm

5 cm

Not drawn accurately

4 cm

The area of the shape is 50 cm^2
Work out the perimeter of the shape.   **[5 marks]**

A : $8 \times 4 = 32 \text{ cm}^2$
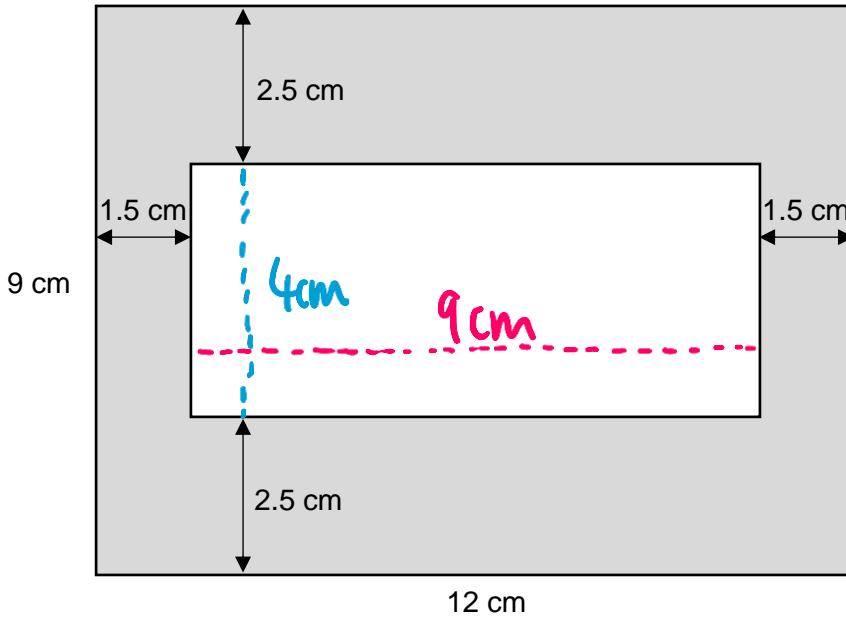
$50 - 32 = 18 \text{ cm}^2$

$18 \div 3 = 6$

$8 + 4 + 5 + 6 + 3 + 10 = 36$

Answer _____ 36 _____ cm

7   A rectangular hole is cut from a larger rectangle.

2.5 cm

1.5 cm   1.5 cm

9 cm   4cm

           9cm

2.5 cm

12 cm

Work out the area of shaded region.   **[4 marks]**

$$9 - 2.5 - 2.5 = 4$$
$$12 - 1.5 - 1.5 = 9$$

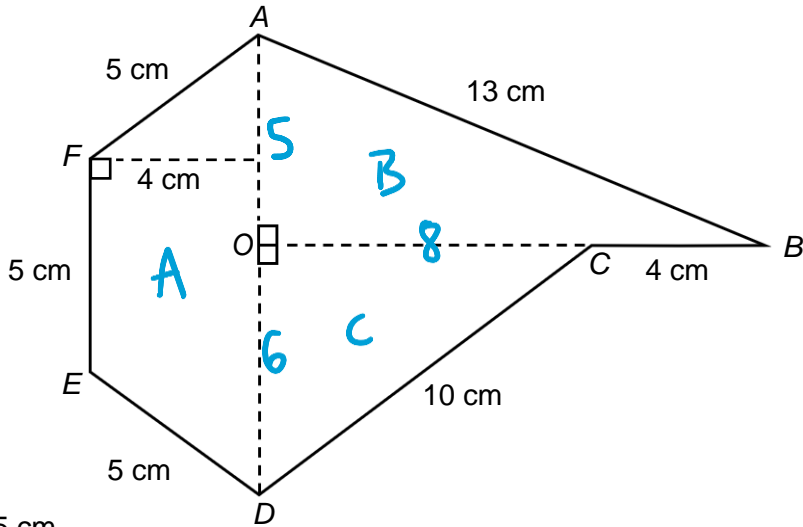$$12 \times 9 = 108 \qquad 108 - 36 = 72$$
$$9 \times 4 = 36$$

Answer _____ 72 _____ cm^2

8

Turn over ▶

8   *ABCDEF* is a hexagon made from two right angled triangles and a trapezium.

$AO = 5$ cm
$AD = 11$ cm
$OC = 8$ cm

8 (a)   Work out the perimeter of the hexagon.   **[2 marks]**

$5 + 5 + 5 + 13 + 4 + 10$

Answer _____ 42 _____ cm

8 (b)   Work out the area of the hexagon.   **[4 marks]**

A: $\frac{1}{2}(5+11) \times 4 = 32$ cm²
B: $\frac{1}{2} \times 5 \times 8 = 20$ cm²
C: $\frac{1}{2} \times 6 \times 8 = 24$ cm²

$32 + 20 + 24$

76

Answer _____ 76 _____ cm²

9 *ABCD* is a square.
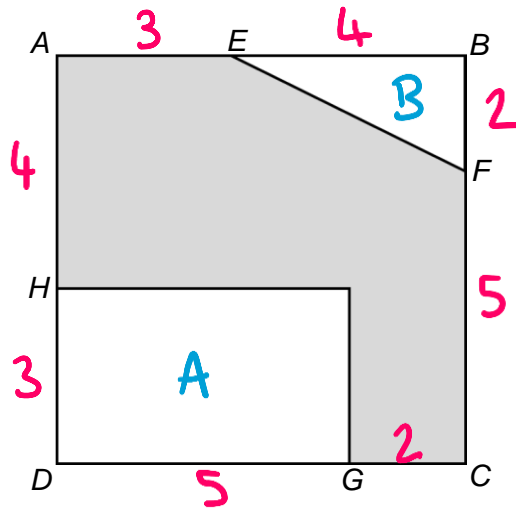
$GC = 2$cm $\qquad AE = 3$cm $\qquad EB = AH = 4$ cm $\qquad FC = 5$cm

Work out the area of shaded region. **[5 marks]**

$$7 \times 7 = 49$$

$$3 \times 5 = 15$$
$$\tfrac{1}{2} \times 2 \times 4 = 4$$

$$49 - 15 - 4 = 30$$

Answer _____ 30 _____ cm^2

11