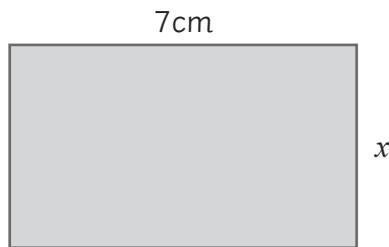# Area
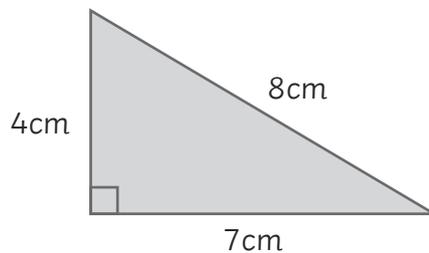
1. The area of the square below is 121cm². Calculate the value of *x*.
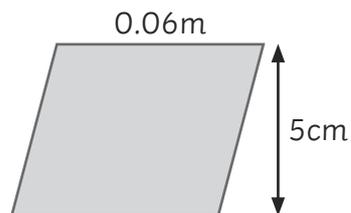
x

2. The area of the rectangle below is 28cm². Calculate the width (*x*).
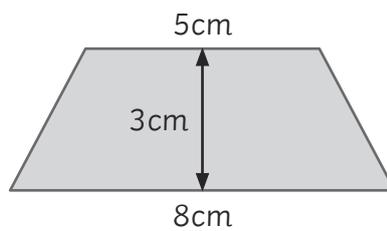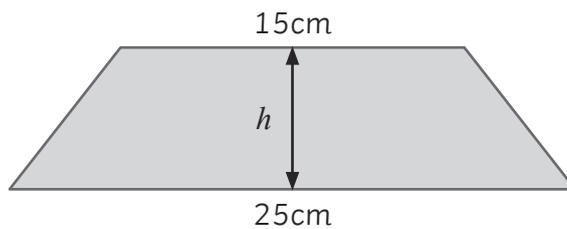
7cm

x

3. Calculate the area of the triangle.

8cm

4cm

7cm

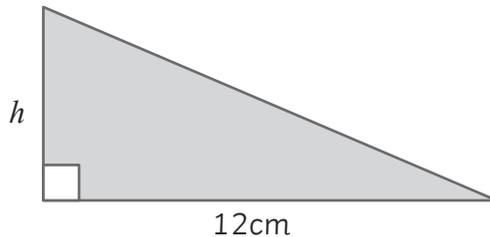4. Calculate the area of the parallelogram. Give your answer in cm².

0.06m

5cm

5. Calculate the area of the trapezium.

5cm

3cm

8cm

_____

_____

6. The area of the trapezium is 128cm^2. Calculate the height (h).

15cm

h

25cm

_____

_____

_____

7. The area of the triangle is 30cm^2. Calculate its height (h).
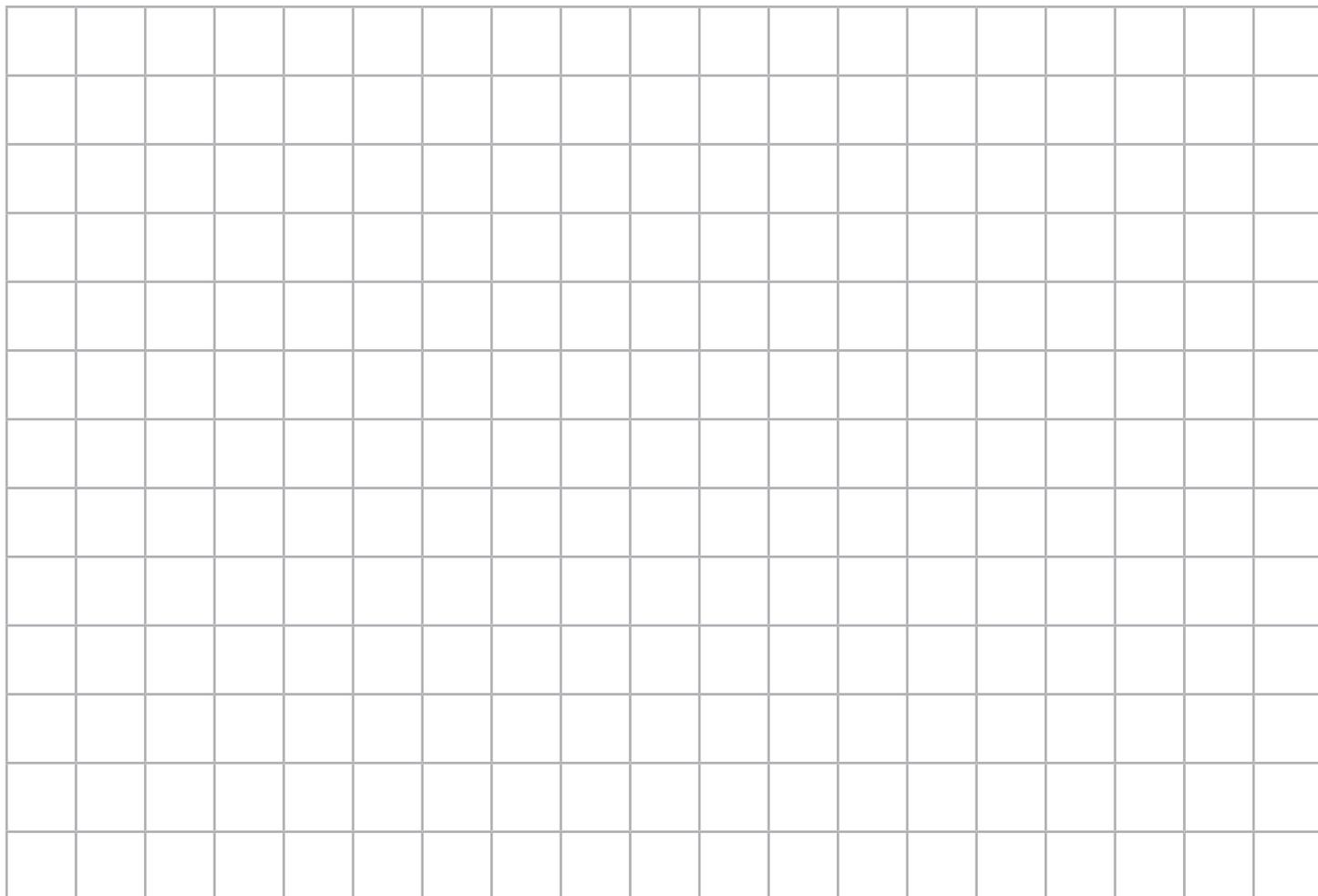
h

12cm

_____

_____

_____

8. The following shape is made up of a triangle and a square. The triangle sits directly on top of the square. Calculate the total area. **Remember to show your workings.**

12cm

8cm

_____

_____

_____

_____
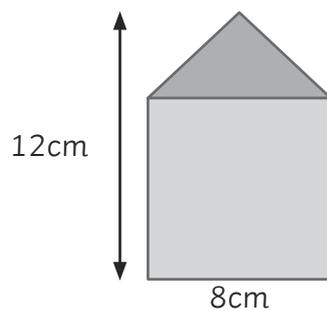
Extension

Draw three 4-sided shapes which have the same perimeter but different areas.

Area - Answers

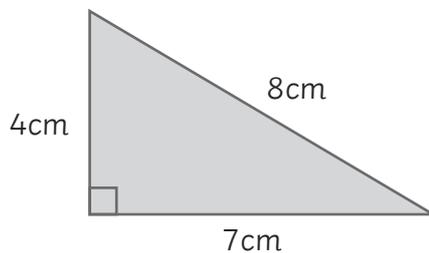1. The area of the square below is 121cm². Calculate the value of x.

x

√121 = 11cm

x = 11cm

2. The area of the rectangle below is 28cm². Calculate the width (x).

7cm

x

28 ÷ 7 = 4cm

x = 4cm

3. Calculate the area of the triangle.

8cm

4cm

7cm

$\frac{1}{2}$ × (4 × 7) = 14cm² or $\frac{4 \times 7}{2}$ = 14cm²

4. Calculate the area of the parallelogram. Give your answer in cm².

0.06m

5cm
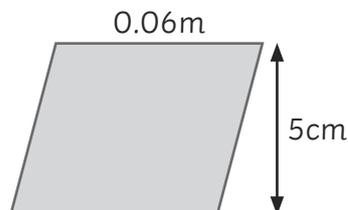
0.06m = 6cm

6 × 5 = 30cm²

5. Calculate the area of the trapezium.

5cm

3cm

8cm
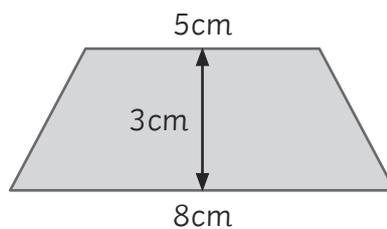
$\frac{1}{2}$ × (5 + 8) × 3 = 19.5cm²

6. The area of the trapezium is 128cm². Calculate the height (h).

15cm

h
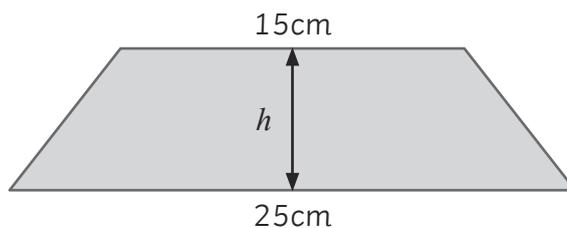
25cm

128 × 2 = 256cm²
256 ÷ (25 + 15) = 6.4cm
h = 6.4cm

7. The area of the triangle is 30cm². Calculate its height (h).

h

12cm
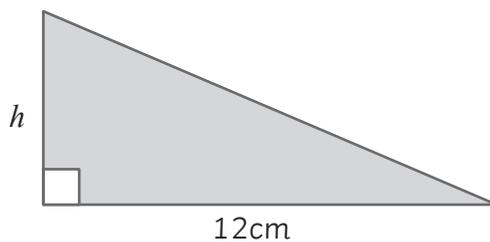
30 × 2 = 60cm²
60 ÷ 12 = 5cm
h = 5cm

8. The following shape is made up of a triangle and a square. The triangle sits directly on top of the square. Calculate the total area. **Remember to show your workings.**
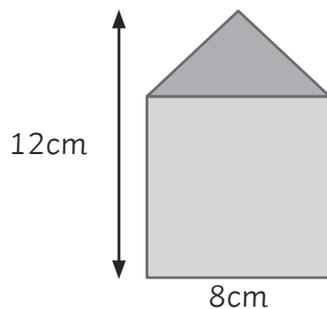
Area of square: 8 × 8 = 64cm²
Height of triangle: 12 - 8 = 4cm
Area of triangle: $\frac{1}{2}$ × (8 × 4) = 16cm²
Total area*: 64 + 16 = 80cm²*

Extension

Draw three 4-sided shapes which have the same perimeter but different areas.

Any 3 shapes that satisfy the criteria. One possible example: