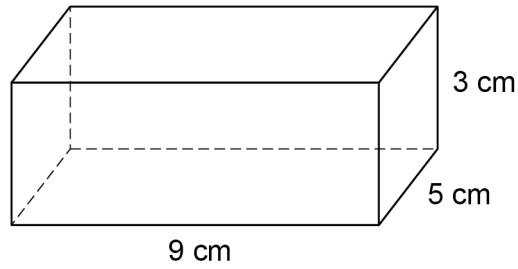


1

Here is a cuboid.



The two **largest** faces are blue.

The other four faces are green.

Is the total blue area greater than the total green area?

You **must** show your working.

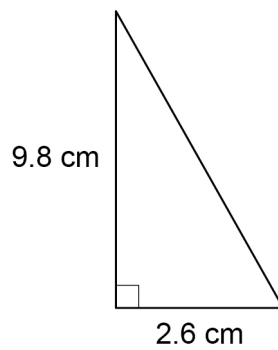
[3 marks]

$$\text{Blue: } 2 \times (9 \times 5) \quad (1)$$
$$= 90 \text{ cm}^2$$

$$\text{Green: } 2 \times (9 \times 3) + 2 \times (5 \times 3) \quad (1)$$
$$= 54 \text{ cm}^2 + 30 \text{ cm}^2$$
$$= 84 \text{ cm}^2$$

$$\text{Yes. } 90 > 84. \quad (1)$$

- 2 (a) Work out the area of this triangle.



Not drawn
accurately

[2 marks]

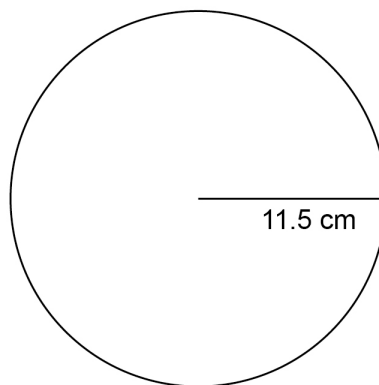
$$\frac{1}{2} \times 9.8 \times 2.6 = 12.74$$

①

①

Answer 12.74 cm²

- 2 (b) A circle has a radius of 11.5 cm



Not drawn
accurately

Work out the area of the circle.

[2 marks]

$$\pi \times 11.5^2 = 132.25 \pi$$

①

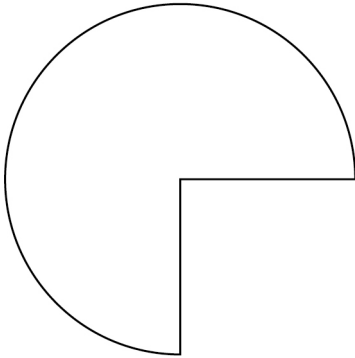
$$= 415.48 \dots$$

①

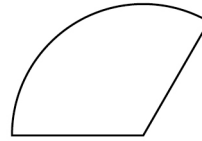
Answer 415 cm²

3 Here are two shapes, P and Q.

P
 $\frac{3}{4}$ of a circle, radius 20 cm



Q
 $\frac{1}{3}$ of a circle, radius 15 cm



Not drawn accurately

How many times bigger is the area of P than the area of Q?

You **must** show your working.

[4 marks]

$$\text{Area of P} : \frac{3}{4} \times (\pi \times 20^2)$$

$$= \frac{3}{4} \times 400 \pi \quad (1)$$

$$= 300 \pi \quad (1)$$

$$\text{Area of Q} : \frac{1}{3} \times (\pi \times 15^2)$$

$$= \frac{1}{3} \times 225 \pi$$

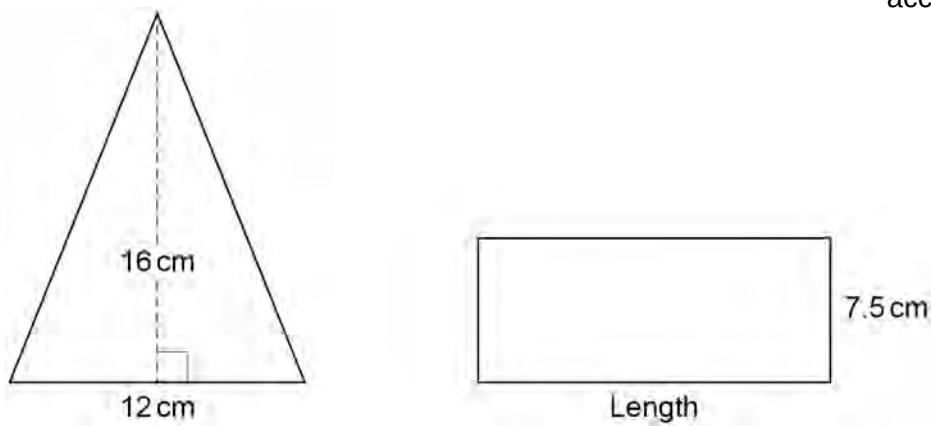
$$= 75 \pi \quad (1)$$

$$\frac{P}{Q} = \frac{300}{75} = 4 \quad (1)$$

Answer 4

4

The rectangle and the triangle have the same area.

Not drawn
accurately

Work out the length of the rectangle.

[3 marks]

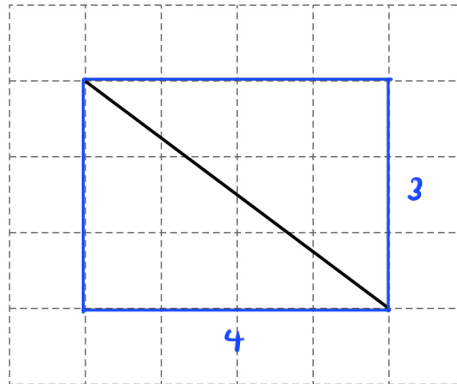
$$\text{Area of triangle: } \frac{1}{2} \times 16 \times 12 = 96 \text{ cm}^2 \quad (1)$$

$$\text{Area of rectangle: } 96 = 7.5 \times \text{length}$$

$$\text{length} = \frac{96}{7.5} = 12.8 \text{ cm} \quad (1) \quad (1)$$

Answer 12.8 cm

- 5 (a) A diagonal of a rectangle is drawn on a centimetre grid. The sides of the rectangle are on the grid lines.



Work out the area of the rectangle.

[2 marks]

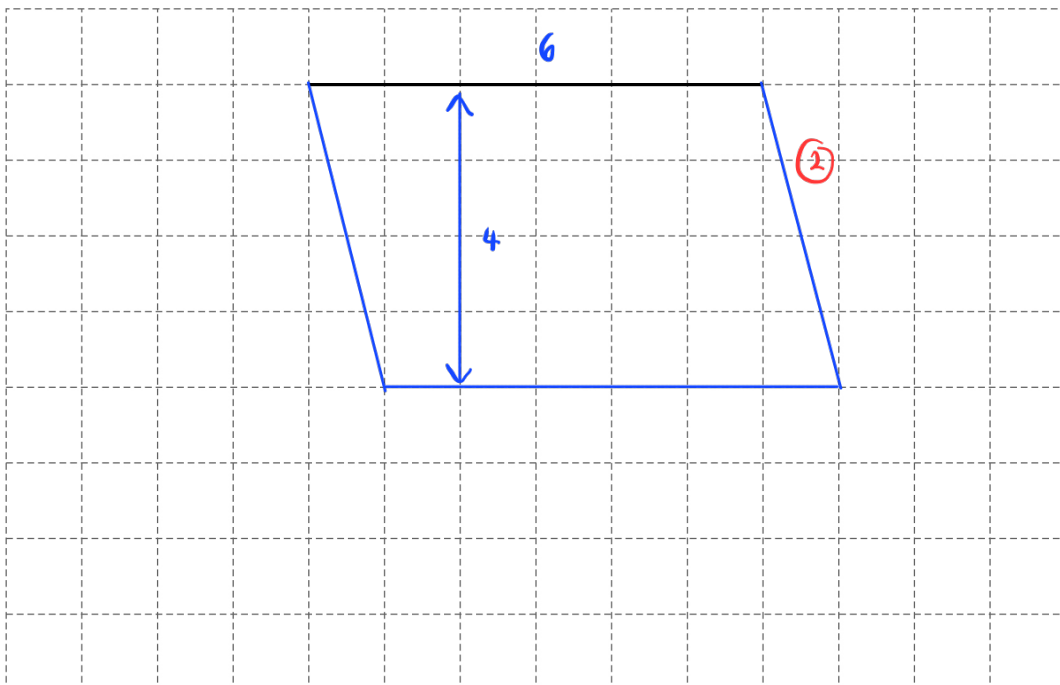
$$4 \times 3 = 12$$

Answer 12 cm²

- 5 (b) One side of a parallelogram is drawn on this centimetre grid. The parallelogram does **not** have any right angles.

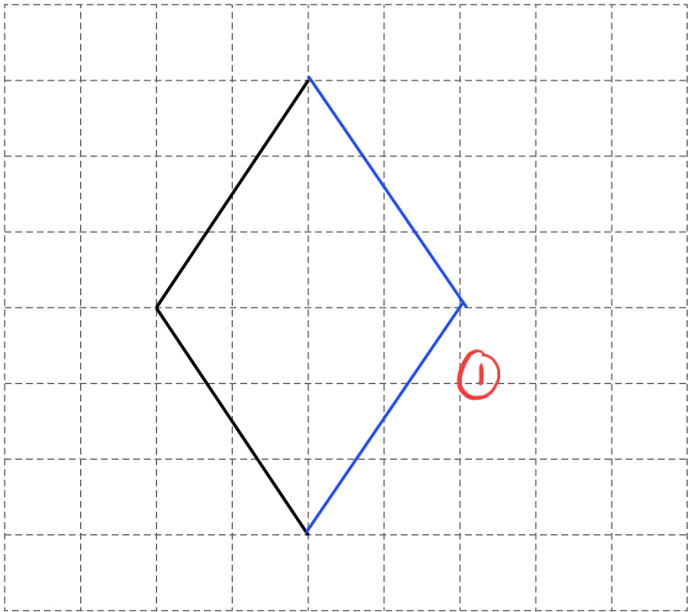
Complete the parallelogram so that it has area 24 cm²

[2 marks]

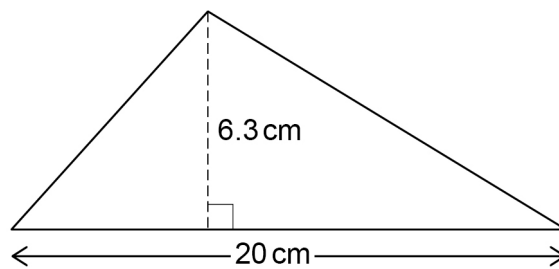


5 (c) Two sides of a rhombus are drawn on this grid.
Complete the rhombus.

[1 mark]



6

Not drawn
accurately

Work out the area of this triangle.

Area of triangle = $\frac{1}{2} \times \text{base} \times \text{height}$

[2 marks]

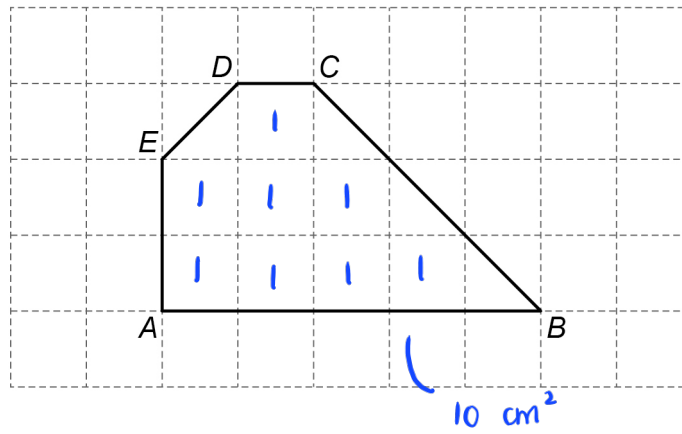
$$\frac{1}{2} \times 20 \times 6.3 \quad \checkmark \textcircled{1}$$

$$= 10 \times 6.3$$

$$= 63 \text{ cm}^2 \quad \checkmark \textcircled{1}$$

Answer 63 cm²

- 7 Shape $ABCDE$ is drawn on a centimetre grid.



- 7 (a) On this centimetre grid,
draw a **rectangle** with the same area as shape $ABCDE$.

[2 marks]

