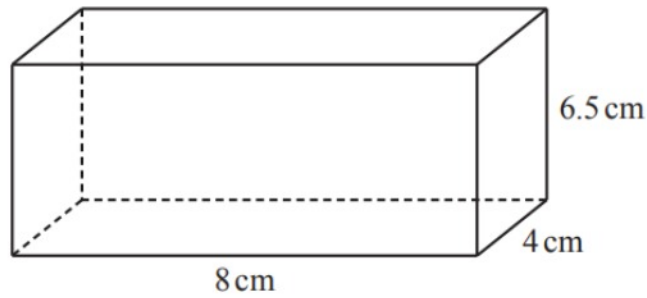


Q Prisms: Volume and Surface Area

2



NOT TO
SCALE

The diagram shows a cuboid.

Calculate the volume of the cuboid.

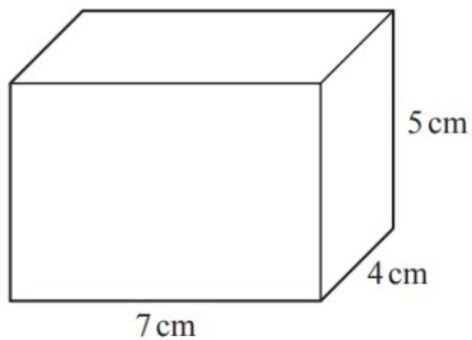
..... cm^3 [1]

- 1** A cuboid has a square base of side 10 cm and a volume of 1200 cm^3 .

Work out the height of the cuboid.

..... cm [2]

4

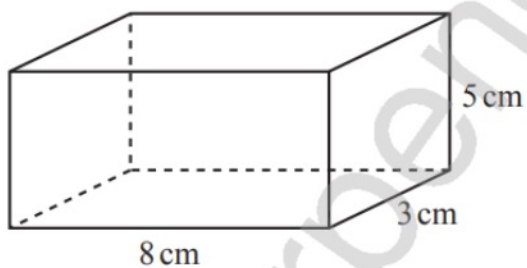


NOT TO
SCALE

Calculate the **total** surface area of this cuboid.

..... cm^2 [3]

3

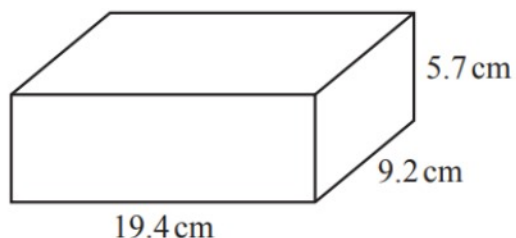


NOT TO
SCALE

Find the total surface area of the cuboid.

..... cm^2 [3]

1 (a)



NOT TO
SCALE

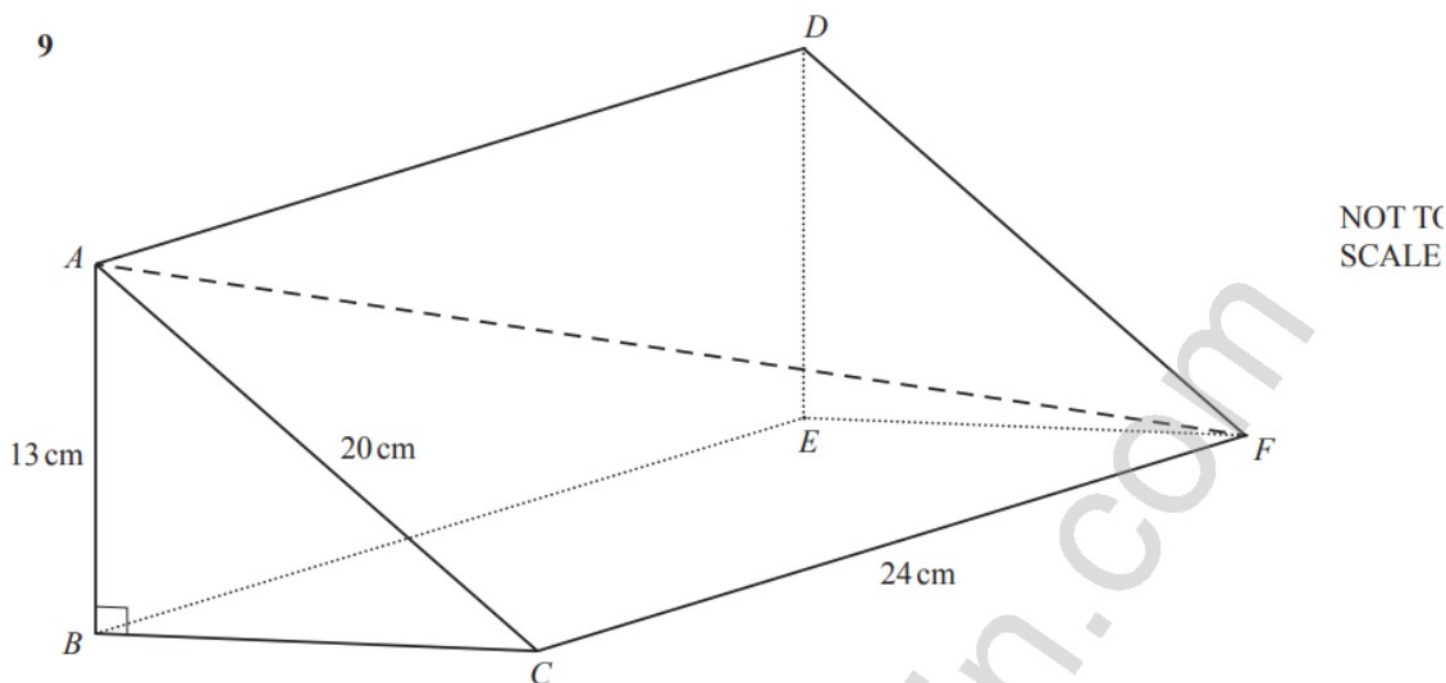
The diagram shows a brick in the shape of a cuboid.

(i) Calculate the total surface area of the brick.

..... cm^2 [3]

5 Find the total surface area of a cuboid with length 8 cm, width 6 cm and height 3 cm.

..... cm^2 [3]



The diagram shows a prism, $ABCDEF$.

$AB = 13$ cm, $AC = 20$ cm, $CF = 24$ cm and angle $ABC = 90^\circ$.

(a) Calculate the total surface area of the prism.

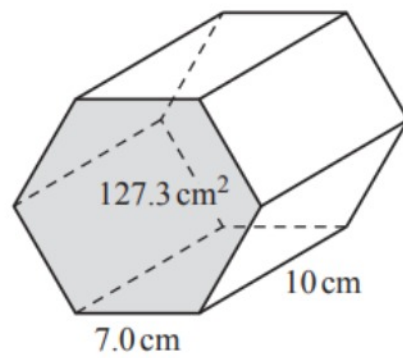
..... cm^2 [6]

- 16 The volume of a cylinder is 1970 cm^3 .
The height of the cylinder is 12.8 cm.

Calculate the radius of the cylinder.

..... cm [3]

- (ii) The hexagon is the cross-section of a prism of length 10 cm.



NOT TO
SCALE

- (a) Find the volume of the prism.

..... cm^3 [1]

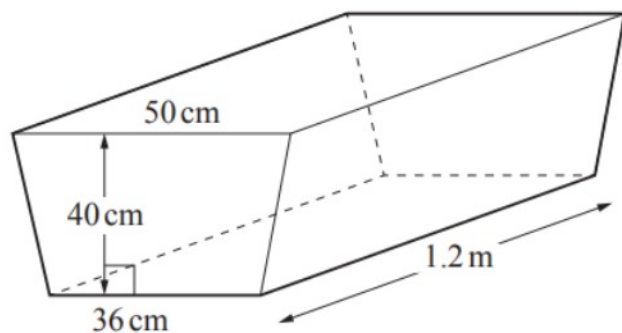
- (b) Calculate the surface area of the prism.

..... cm^2 [2]

- 19 The cross-section of a prism is an equilateral triangle of side 6 cm.
The length of the prism is 20 cm.

Calculate the total surface area of the prism.

..... cm^2 [4]



NOT TO
SCALE

The diagram shows a water trough in the shape of a prism.
The prism has a cross-section in the shape of an isosceles trapezium.
The trough is completely filled with water.

- (a) Show that the volume of water in the trough is 206.4 litres.

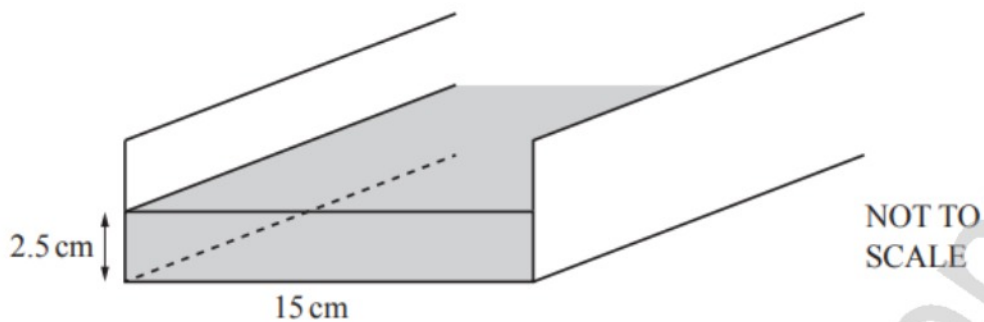
[3]

- (b) The water from the trough is emptied at a rate of 600 ml per second.

Calculate the time taken, in minutes and seconds, for the trough to be emptied.

..... minutes seconds [3]

(b)



Water flows at a speed of 20 cm/s along a rectangular channel into a lake.
The width of the channel is 15 cm.
The depth of the water is 2.5 cm.

Calculate the amount of water that flows from the channel into the lake in 1 hour.
Give your answer in litres.

..... litres [4]

- 18 A solid cylinder has radius 5 cm and height 8 cm.

Calculate the total surface area of the cylinder.

..... cm² [4]

- 10 A solid cylinder has radius 3 cm and height 4.5 cm.

Calculate the **total** surface area of the cylinder.

..... cm² [4]

16 A cylinder with height 12.5 cm has a curved surface area of $105\pi \text{ cm}^2$.

Calculate the volume of the cylinder.

..... cm^3 [4]