16 The diagram shows the front of a wooden door with a semicircular glass window.
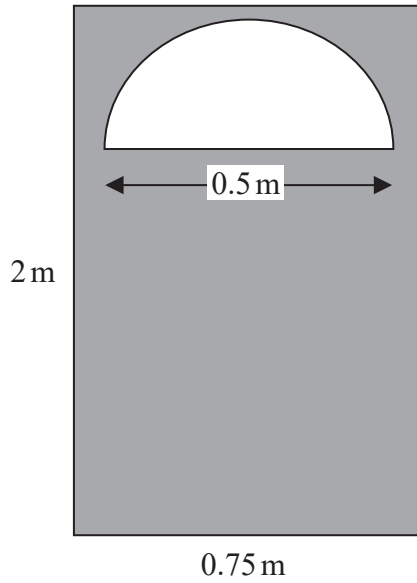

Diagram **NOT**
accurately drawn

0.5 m

2 m

0.75 m

Julie wants to apply 2 coats of wood varnish to the front of the door, shown shaded in the diagram.

250 millilitres of wood varnish covers $4\,m^2$ of the wood.

Work out how many millilitres of wood varnish Julie will need.
Give your answer correct to the nearest millilitre.

.... millilitres

(Total for Question 16 is 5 marks)

17 Yasmin has some identical rectangular tiles.
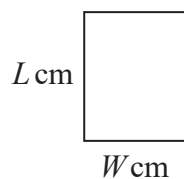Each tile is L cm by W cm.

L cm   Diagram **NOT** accurately drawn

W cm

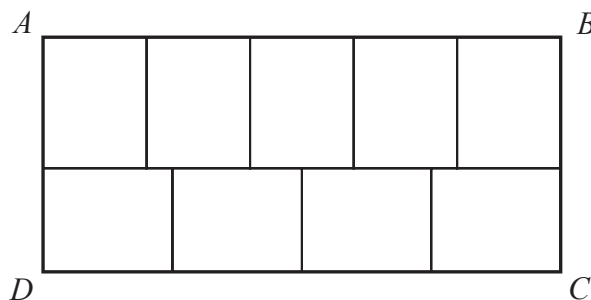Using 9 of her tiles, Yasmin makes rectangle $ABCD$ shown in the diagram below.

A B

Diagram **NOT** accurately drawn

D C

The area of $ABCD$ is $1620\,\text{cm}^2$

Work out the value of L and the value of W.

$L =$ .... $W =$ ....

(Total for Question 17 is 5 marks)

18 Alison buys 5 apples and 3 pears for a total cost of $1.96
Greg buys 3 apples and 2 pears for a total cost of $1.22

Michael buys 10 apples and 10 pears.

Work out how much Michael pays for his 10 apples and 10 pears.
Show your working clearly.

$ ....

(Total for Question 18 is 5 marks)

19 Write 3.6×10^3 as a product of powers of its prime factors.
Show your working clearly.

....

(Total for Question 19 is 3 marks)

20 In 2018, the population of Sydney was 5.48 million.
This was 22% of the total population of Australia.

Work out the total population of Australia in 2018
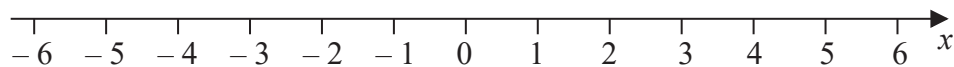Give your answer correct to 3 significant figures.

.... million

(Total for Question 20 is 3 marks)

21 (i) Solve the inequalities $-7 \leqslant 2x - 3 < 5$

....

(3)

(ii) On the number line, represent the solution set to part (i)

(2)

(Total for Question 21 is 5 marks)

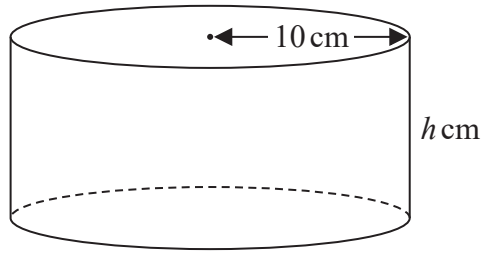**22** A solid aluminium cylinder has radius 10 cm and height h cm.

Diagram **NOT** accurately drawn

$\leftarrow$ 10 cm $\rightarrow$

h cm

The mass of the cylinder is 5.4 kg.
The density of aluminium is 0.0027 kg/cm³

Calculate the value of h.
Give your answer correct to one decimal place.

$h = $ ....

(Total for Question 22 is 5 marks)

TOTAL FOR PAPER IS 100 MARKS