

1. Here is a rectangle.

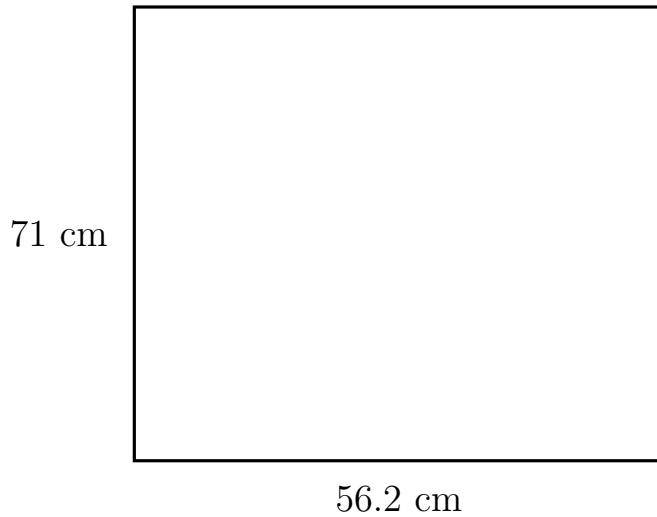


Diagram NOT  
accurately drawn

Work out the area of the rectangle.

...~~3990.2~~...  $cm^2$

**FYI:**  $71 \times 56.2$  (M1)

2. Here is a square.

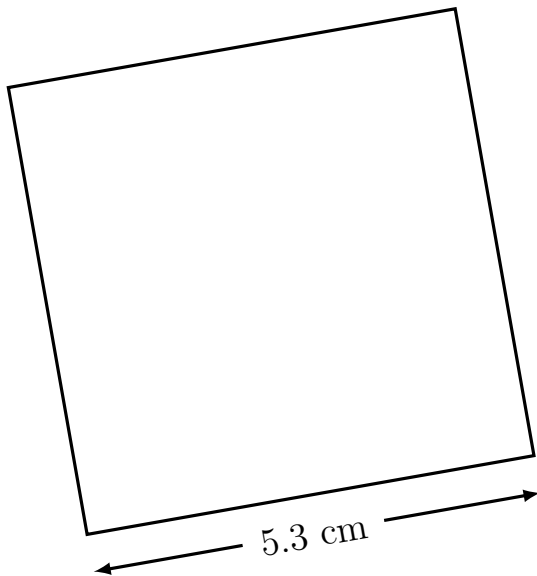
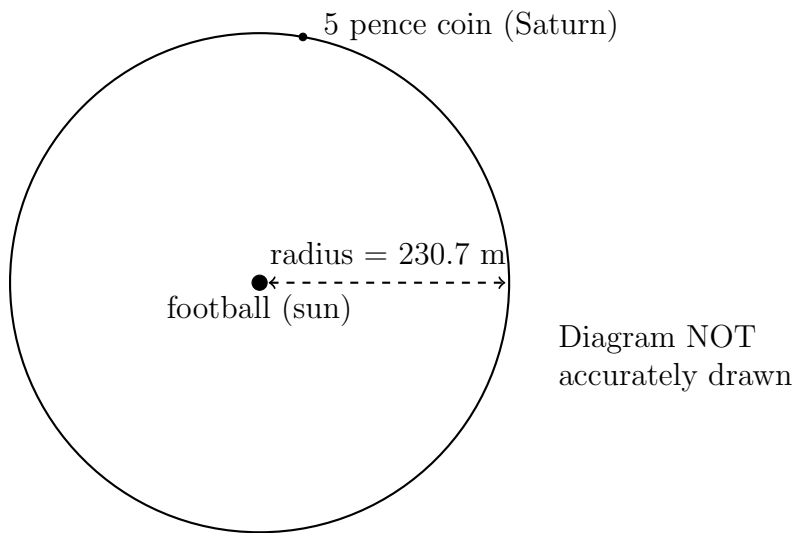


Diagram NOT  
accurately drawn

Work out the area of the square.

...**28.09**...  $cm^2$

3. The diagram shows part of a plan view of scale model of our solar system.  
The sun is represented by a football and Saturn is represented by a 5 pence coin.



Source [www.en.wikipedia.org](http://www.en.wikipedia.org)

The orbit of Saturn around the sun is represented by a circle made of rope.

The radius of the circle is 230.7 m.

Work out the area enclosed by the rope representing Saturn's orbit in  $m^2$ .

Give your answer correct to the nearest 1000.

SPACE LEFT **2cm**

.. **167.000** ..  $m^2$

**FYI:**  $230.7^2 \times \pi = 167203.3...$  (M1)

4. This diagram shows a cuboid.

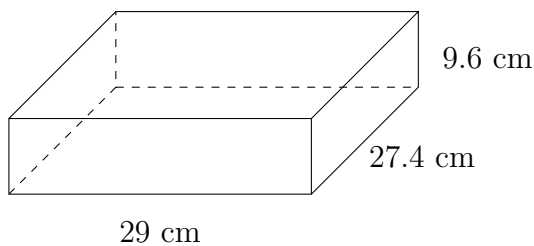


Diagram NOT accurately drawn

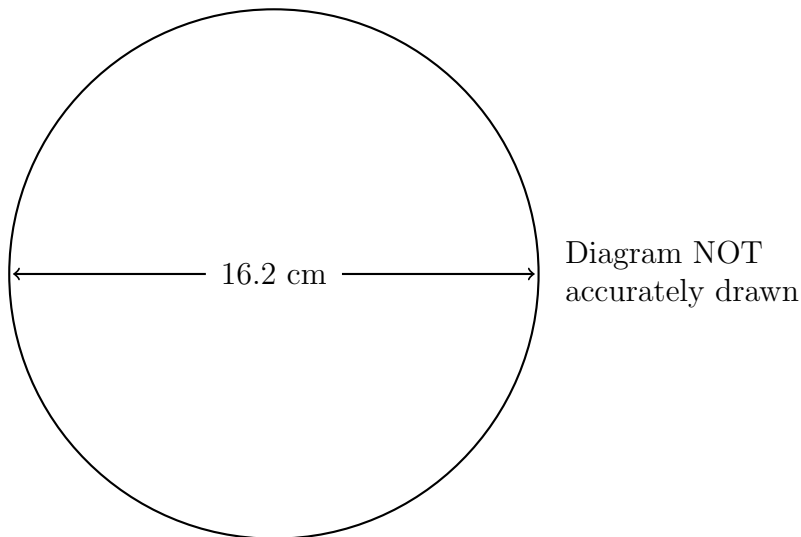
Work out the volume of the cuboid.

Give your answer correct to 1 decimal place.

.. **7.628.2** ..  $cm^3$

**FYI:**  $29 \times 27.4 \times 9.6 = 7628.16$  (M1)

5. Here is a picture of the top of a soup bowl.



The top of the soup bowl is in the shape of a circle.

The diameter of the top of the soup bowl is 16.2 cm.

Work out the circumference of the top of the soup bowl.

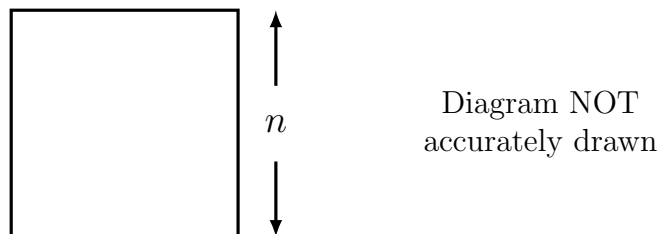
Give your answer correct to 1 decimal place.

SPACE LEFT **2cm**

.....**50.9**..... cm

**FYI:**  $16.2 \times \pi = 50.89\dots$  or  $50.8$  (M1)

6. Here is a square with area  $0.04 \text{ m}^2$



Work out the side length  $n$  SPACE LEFT **1cm**

.....**0.2**..... m

7. Here is a right angled triangle.

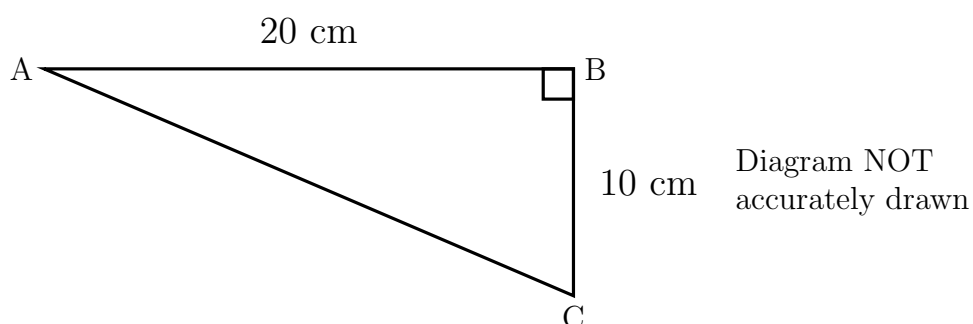


Diagram NOT accurately drawn

$$AB = 20 \text{ cm}$$

$$BC = 10 \text{ cm}$$

Work out the length of AC.

Give your answer correct to 1 decimal place.

SPACE LEFT **2cm**

....**22.4**.... cm

$$\text{FYI: } \sqrt{10^2 + 20^2} = 22.360... = 10\sqrt{5} \text{ (M2)} \quad 10^2 + 20^2 \text{ (M1)} = 500$$

8. The diagram shows the right angled triangle, FGH, which is formed between the flag pole FG, the support rope FH and the ground.

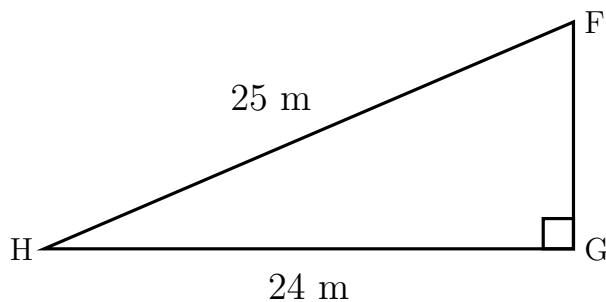


Diagram NOT  
accurately drawn

The distance HG is 24 m.

The support rope, FH is 25 m long

Work out the height of the flag pole FG.

SPACE LEFT **2cm**

.....**7**..... m

$$\text{FYI: } \sqrt{25^2 - 24^2} = 7 \text{ (M2)} \quad 25^2 - 24^2 \text{ (M1)} = 49$$