



1.

[4 marks]

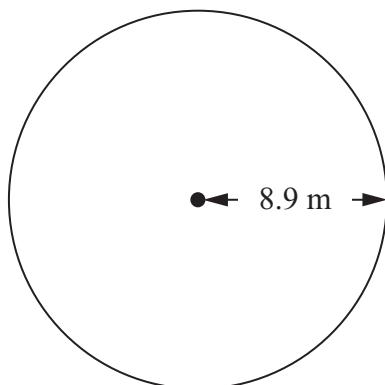


Diagram **NOT**  
accurately drawn

A circular pond has radius 8.9 m.

- (a) Find the area of the pond.  
Write down all the figures on your calculator display.  
State the units of your answer.

..... (3)

- (b) Give the value of your area correct to 2 significant figures.

..... (1)



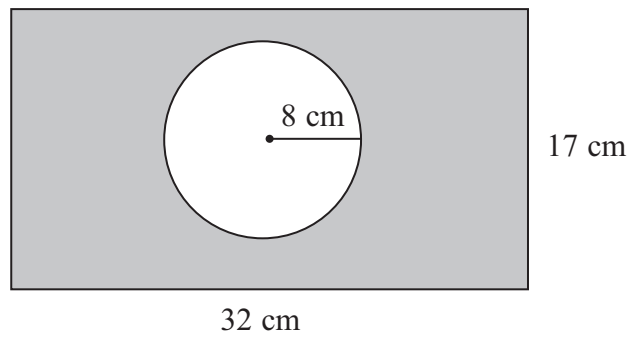


Diagram **NOT**  
accurately drawn

The diagram shows a circle inside a rectangle.

Work out the area of the shaded region.

Give your answer correct to 3 significant figures.

.....cm<sup>2</sup>



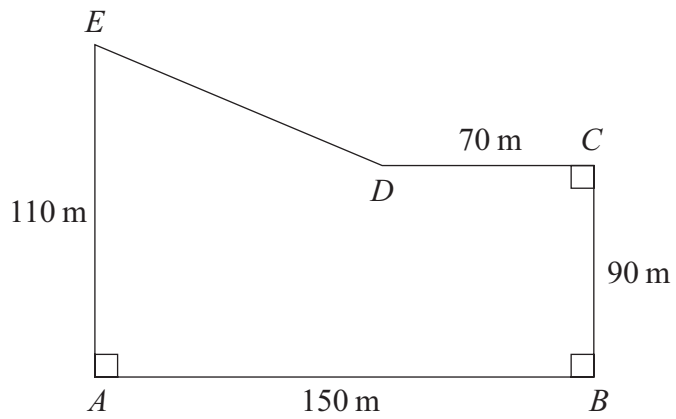


Diagram **NOT**  
accurately drawn

The shape  $ABCDE$  is the plan of a field.  
 $AB = 150\text{ m}$ ,  $BC = 90\text{ m}$ ,  $CD = 70\text{ m}$  and  $EA = 110\text{ m}$ .  
The corners at  $A$ ,  $B$  and  $C$  are right angles.

Work out the area of the field.

.....  $\text{m}^2$



The diagram shows a shape with one line of symmetry.

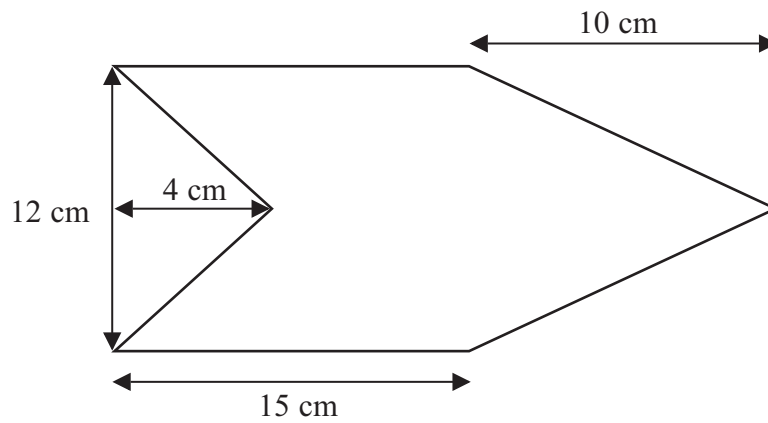


Diagram **NOT**  
accurately drawn

Work out the area of the shape.

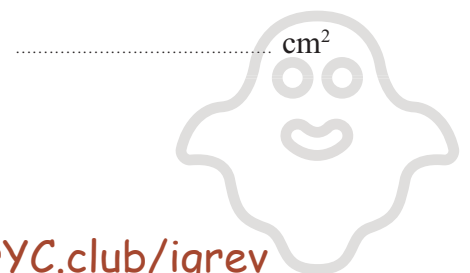
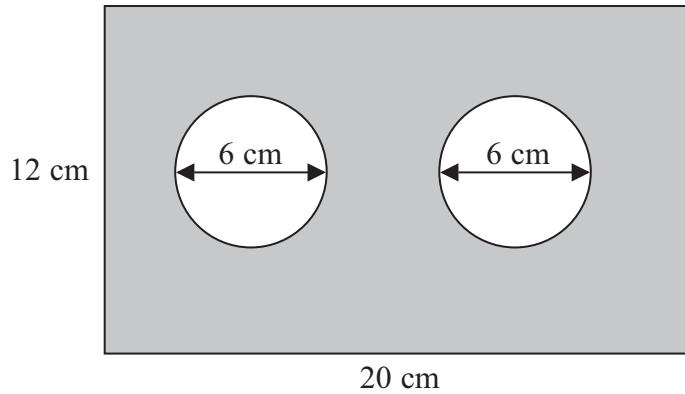


Diagram **NOT**  
accurately drawn



The diagram shows a metal plate in the shape of a rectangle.  
The rectangle has length 20 cm and width 12 cm.  
Two identical circles, each of diameter 6 cm, have been cut out of the plate.

Work out the area of the shaded region of the metal plate.  
Give your answer correct to the nearest  $\text{cm}^2$ .

.....  $\text{cm}^2$



Here are a rectangle and a square.

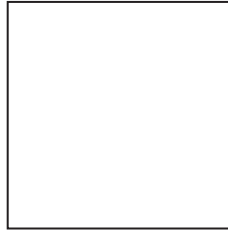
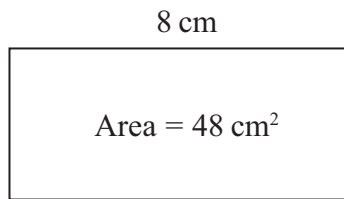


Diagram **NOT**  
accurately drawn

The rectangle has length 8 cm and area  $48 \text{ cm}^2$

The perimeter of the square is the same as the perimeter of the rectangle.

Calculate the area of the square.



The diagram shows a wall.

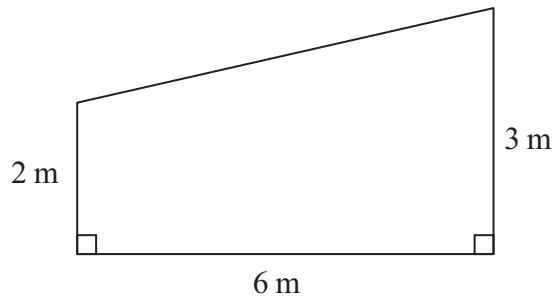


Diagram **NOT**  
accurately drawn

- (a) Calculate the area of the wall.

.....  $\text{m}^2$   
(2)

- (b) 1 litre of paint covers an area of  $20 \text{ m}^2$ .  
Work out the volume of paint needed to cover the wall.  
Give your answer in  $\text{cm}^3$ .

.....  $\text{cm}^3$   
(3)



- (a) Calculate the area of a circle of radius 2 m.  
Give your answer correct to 3 significant figures.

.....m<sup>2</sup>  
(2)

- (b) A circular pond has a radius of 2 m.  
There is a path of width 1 m around the pond.

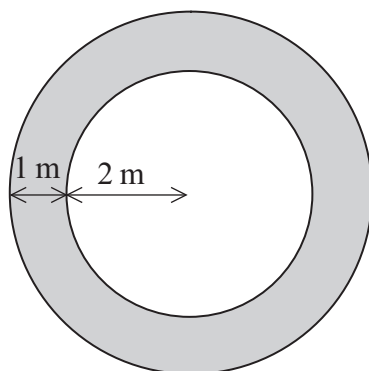


Diagram **NOT**  
accurately drawn

Calculate the area of the path.  
Give your answer correct to 3 significant figures.

.....m<sup>2</sup>  
(2)

- (c) Calculate the outer circumference of the path.  
Give your answer correct to 3 significant figures.

.....m  
(2)





- (a) Calculate the circumference of a circle of radius 40 m.  
Give your answer correct to 3 significant figures.

..... m  
(2)

(b)

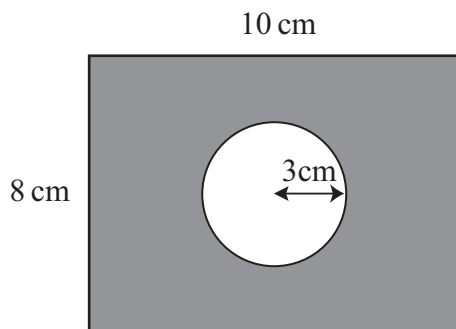


Diagram **NOT**  
accurately drawn

The diagram shows a circle inside a rectangle.  
The rectangle has length 10 cm and width 8 cm.  
The radius of the circle is 3 cm.

Calculate the area of the shaded region.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>  
(4)



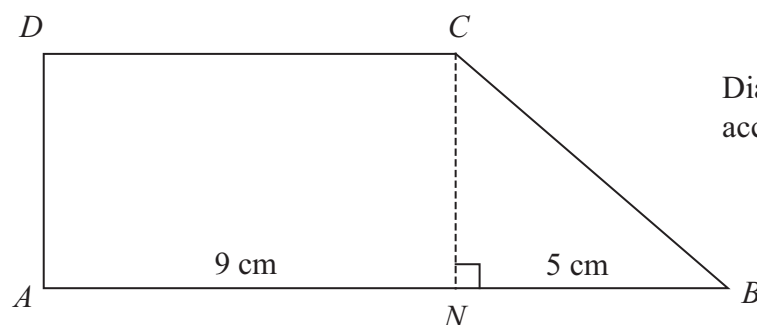


Diagram **NOT**  
accurately drawn

The shape  $ABCD$  is made from a rectangle  $ANCD$   
and the right-angled triangle  $NBC$ .

$ANB$  is a straight line.

$AN = 9$  cm.

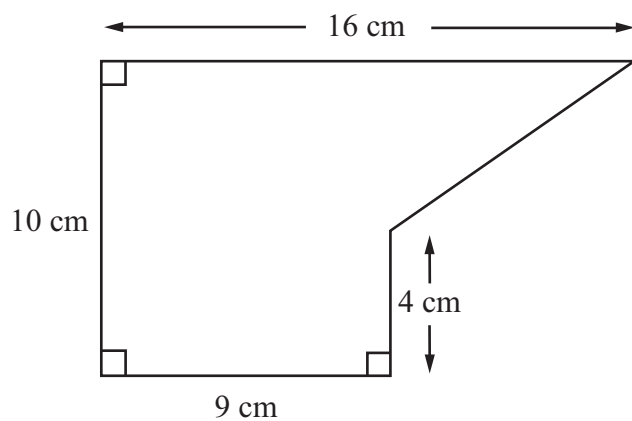
$NB = 5$  cm.

The area of rectangle  $ANCD$  is  $36 \text{ cm}^2$

Work out the area of shape  $ABCD$ .

.....  $\text{cm}^2$





The diagram shows a shape.

Work out the area of the shape.

.....  $\text{cm}^2$



A square hole is cut from a circular piece of card.

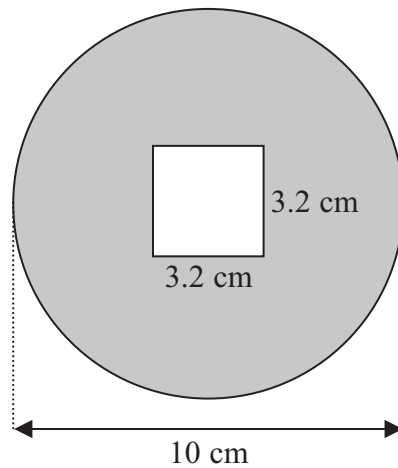


Diagram **NOT**  
accurately drawn

The square has sides of length 3.2 cm.  
The diameter of the circular piece of card is 10 cm.

Work out the area of the shaded region.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>



- (a) Calculate the circumference of a circle of radius 30 cm.  
Give your answer correct to 3 significant figures.

..... cm  
(2)

- (b) The diagram shows a circle with radius 2.1 cm inside a square.  
The circle touches the sides of the square.

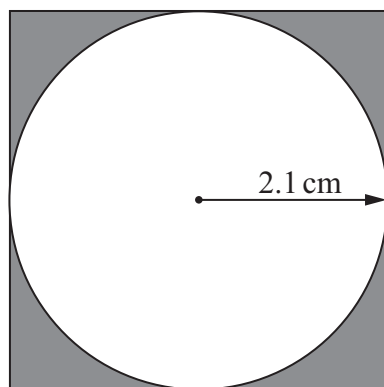


Diagram **NOT**  
accurately drawn

Work out the shaded area.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>  
(4)



The diagram shows a circle inside a rectangle.

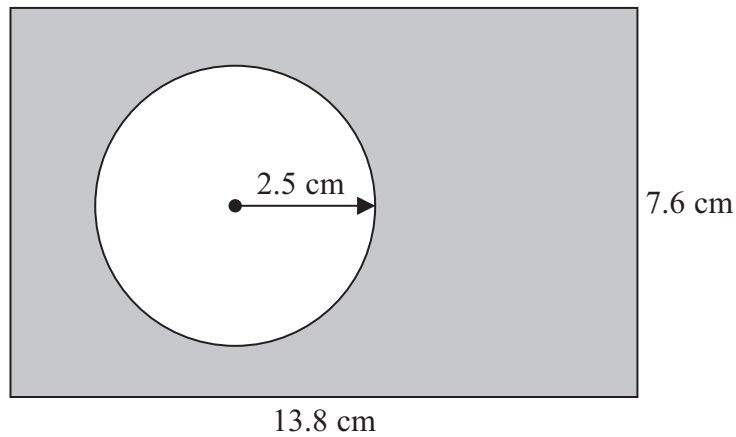


Diagram **NOT**  
accurately drawn

Work out the area of the shaded region.  
Give your answer correct to 3 significant figures.

..... cm<sup>2</sup>



The diagram shows the path of an athlete on a running track.

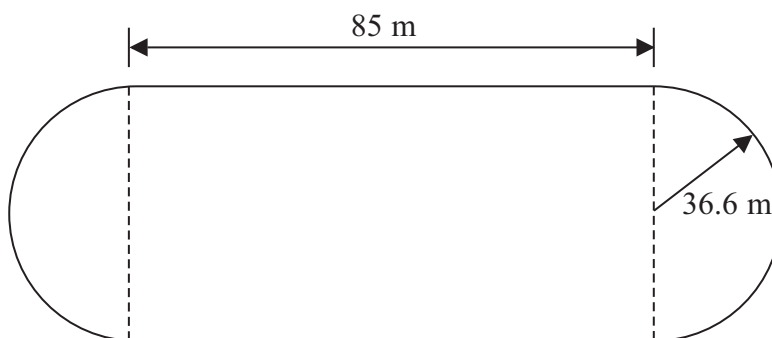


Diagram **NOT**  
accurately drawn

The path consists of two straight lengths and a semicircle at each end.

Each straight length is 85 metres.

Each semicircle has a radius of 36.6 metres.

Calculate the area enclosed by the path.

Give your answer correct to 3 significant figures.

..... m<sup>2</sup>



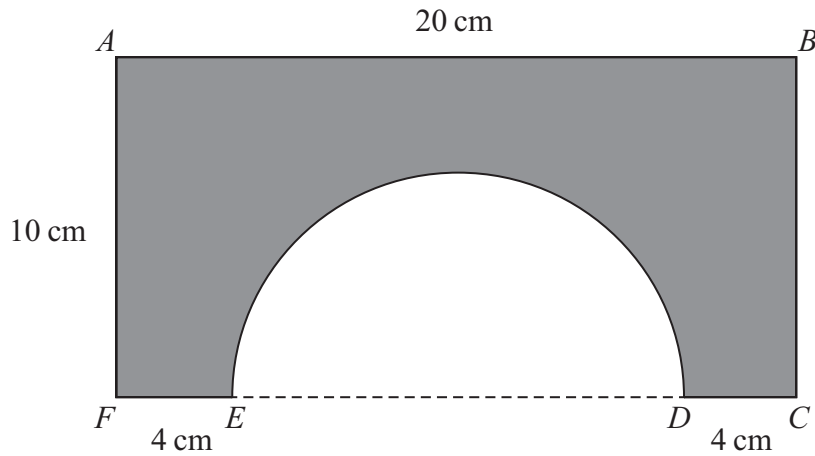


Diagram **NOT**  
accurately drawn

The shaded shape is made by cutting a semicircle from a rectangular piece of card,  $ABCF$ , as shown in the diagram.

$FEDC$  is a straight line.

The centre of the semicircle lies on  $ED$ .

$AF = BC = 10$  cm,  $AB = 20$  cm,  $FE = DC = 4$  cm.

Work out the perimeter of the shaded shape.

Give your answer correct to 3 significant figures.

..... cm

