

SCORE

# Geometry

With Classified  
answer book

8

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## 8- Area of compound shapes

1.

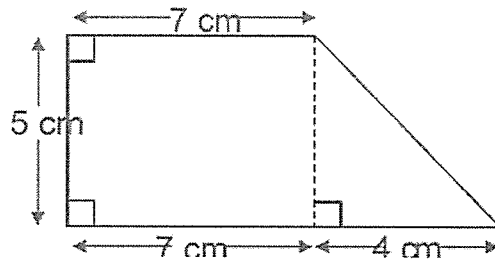


Diagram NOT accurately drawn

Work out the area of the shape.

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

2.

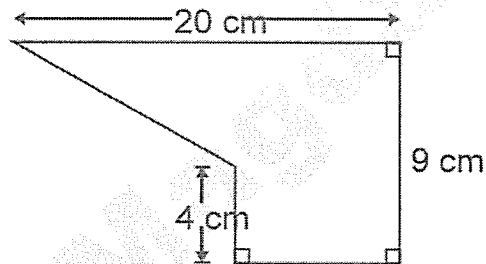
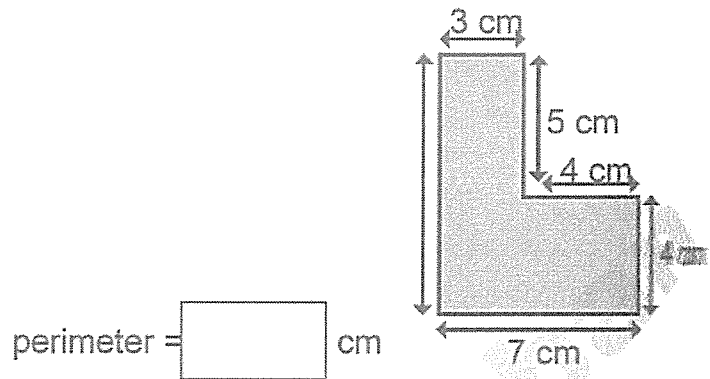


Diagram  
NOT  
accurately  
drawn

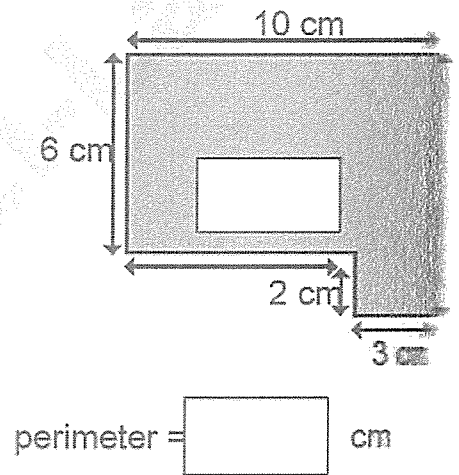
..... cm<sup>2</sup>

3. Work out the unknown lengths and then find the perimeter of each shape.

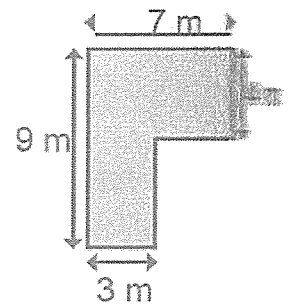
a)



b)



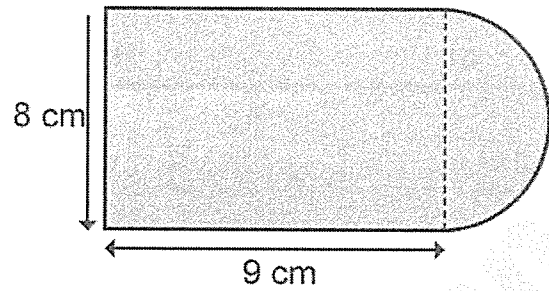
4. Work out the area of the shape.



area =  cm<sup>2</sup>

5. a) Divide this shape into two shapes to find its area.

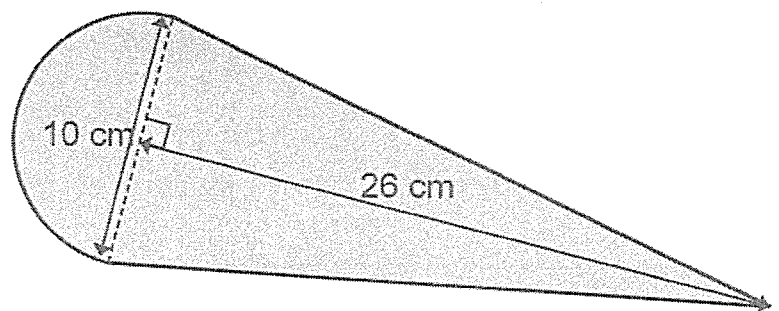
Show all your workings.



- b) Find the perimeter of the shape.

6. The diagram shows the layout of a field of play for a sporting event.

Find the area of the field of play.

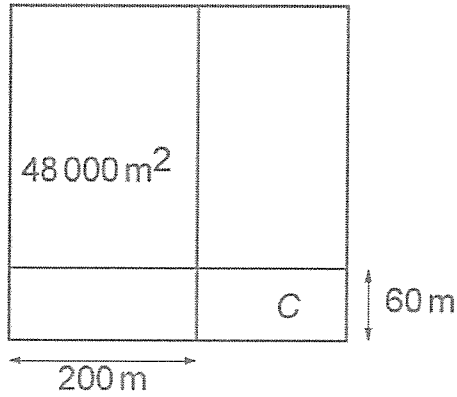


area =

7. The diagram shows a square.

The square is divided into four rectangles by two straight lines.

The area of the largest rectangle is  $48\,000\text{ m}^2$ .



NOT TO  
SCALE

(a) Work out the area of the smallest rectangle, C.

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

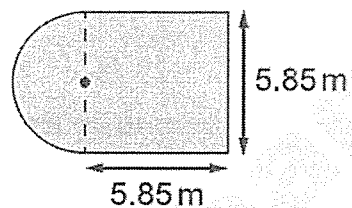
(b) Complete this sentence.

The area  $48\,000\text{ m}^2$  is equivalent to ..... hectares.

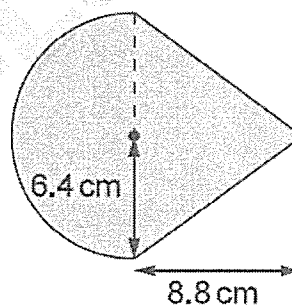
8. For each of these compound shapes,

work out the area of the shape correct to one decimal place (2 d.p.).

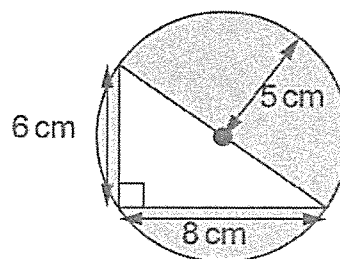
a)



b)



c)



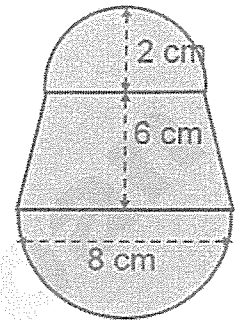


9. Here is the outline of a logo.  
The logo consists of two semi-circles and a trapezium.

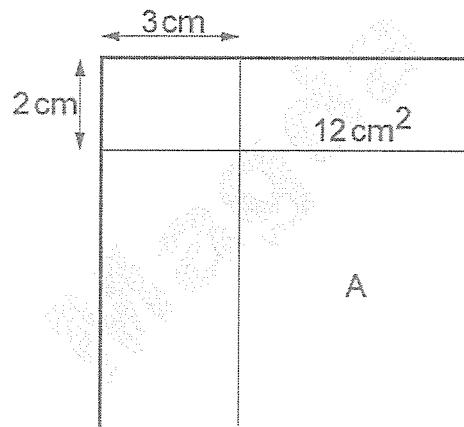
The radius of the bottom semi-circle must be 4 cm

The length of the top of the trapezium must be 4 cm

Explain why both Rosie and Jack are correct.  
Calculate the total area of the logo.



10. The diagram shows a square.  
Two straight lines cut the square into four rectangles.  
The area of one of the rectangles is shown.



Not drawn accurately

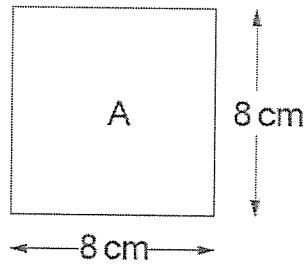
Work out the area of the rectangle marked A.

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

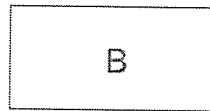
11. I have a square piece of paper.

The diagram shows information about this square labelled

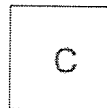
A.



I fold square A in half to make rectangle B.



Then I fold rectangle B in half to make square C.

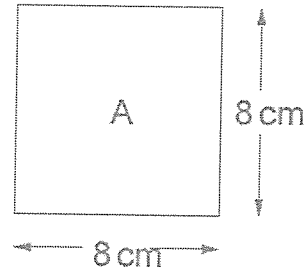


Complete the table below to show the area and perimeter of each shape.

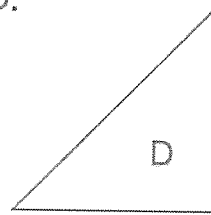
	Area	Perimeter
Square A	$\text{cm}^2$	cm
Rectangle B	$\text{cm}^2$	cm
Square C	$\text{cm}^2$	cm



12. (a) I start again with square A.



Then I fold it in half to make triangle D.



What is the area of triangle D?

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

(b) One of the statements below is true for the perimeter of triangle D.

Tick (✓) the correct one.

The perimeter is less than 24 cm.

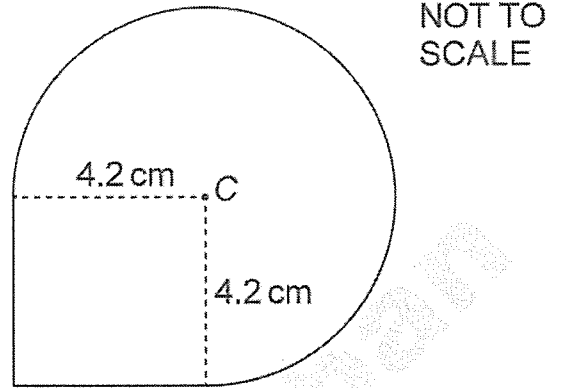
The perimeter is 24 cm.

The perimeter is greater than 24 cm.

Explain your answer.

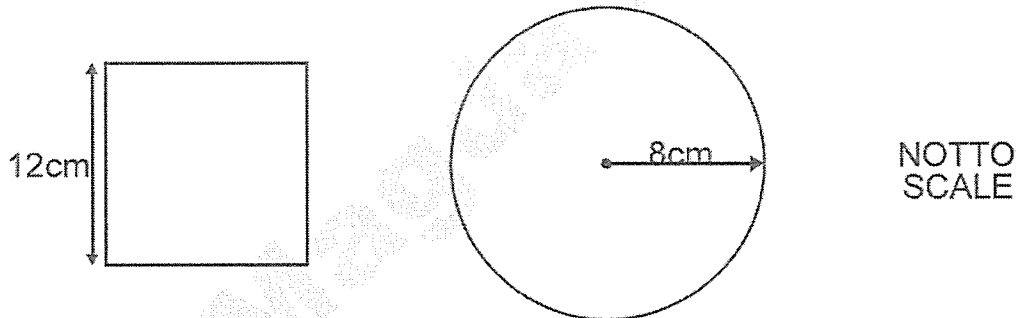
13. A shape is made from part of a circle, centre C, with a radius of 4.2 cm and a square with sides of 4.2 cm.

Find the area of the shape.  
Give your answer correct to one decimal place.



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

Here is a square and a circle.



Each side of the square is 12cm. The circle has a radius of 8cm.

Which has the greater perimeter? Show your working.