

Name:

## Exam Style Questions

Perimeter of a semicircle

Perimeter of a quarter circle



Corbettmaths

Equipment needed: Calculator, pen

### Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

### Video Tutorial

[www.corbettmaths.com/contents](http://www.corbettmaths.com/contents)

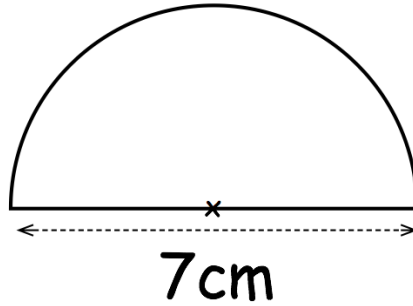
Videos 62, 62a



### Answers and Video Solutions



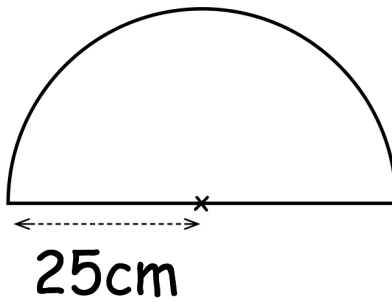
1. Below is a semicircle.



Find the perimeter of the semicircle.  
Give your answer to 3 decimal places.

.....cm  
(3)

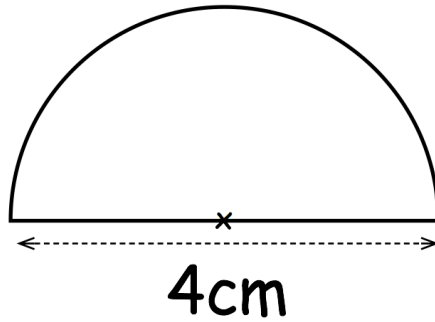
2. Shown is a semicircle.



Find the perimeter of the semicircle.  
Give your answer to 1 decimal place.

.....cm  
(3)

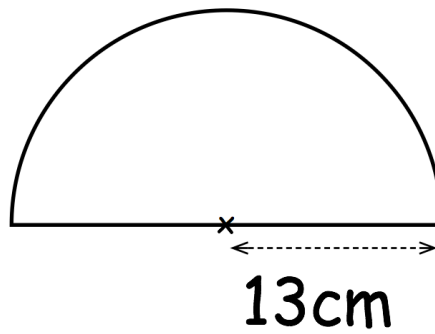
3. Below is a semicircle.



Work out the perimeter of the semicircle.  
Leave your answer in terms of  $\pi$

.....cm  
(3)

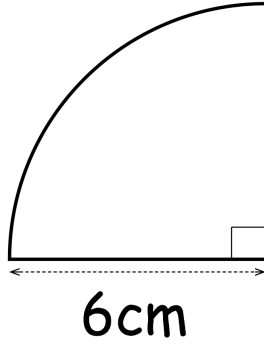
4. Below is a semicircle.



Work out the perimeter of the semicircle.  
Leave your answer in terms of  $\pi$

.....cm  
(3)

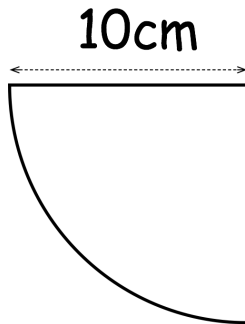
5. Shown below is a quarter-circle with a radius of 6cm



Find the perimeter of the quarter-circle.  
Give your answer to 1 decimal place.

.....cm  
(3)

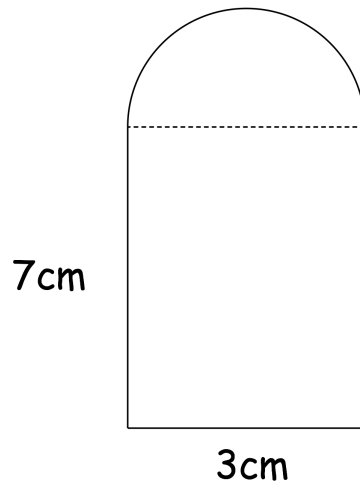
6. Shown below is a quarter-circle with a radius of 10cm



Find the perimeter of the quarter-circle.  
Leave your answer in terms of  $\pi$

.....cm  
(3)

7. Shahida designs a badge using a rectangle and a semicircle.



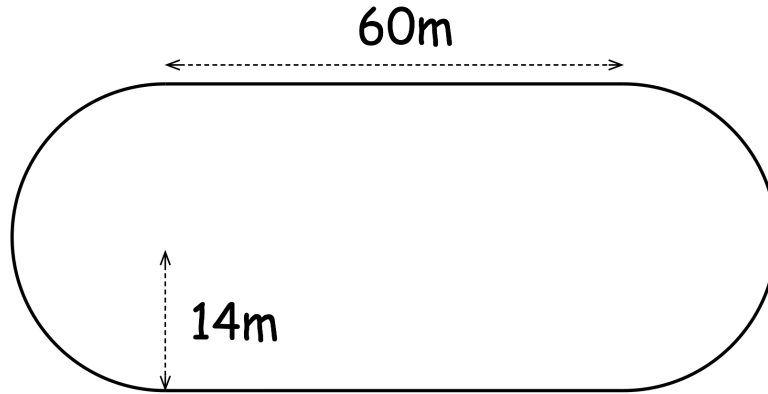
Find the perimeter of the badge.

.....cm  
(4)

8. A school running track has two straights and two semi-circular bends.



Each straight is 60 metres long and each semi-circular bend has a radius of 14 metres.



Maria runs 8 laps of the track.

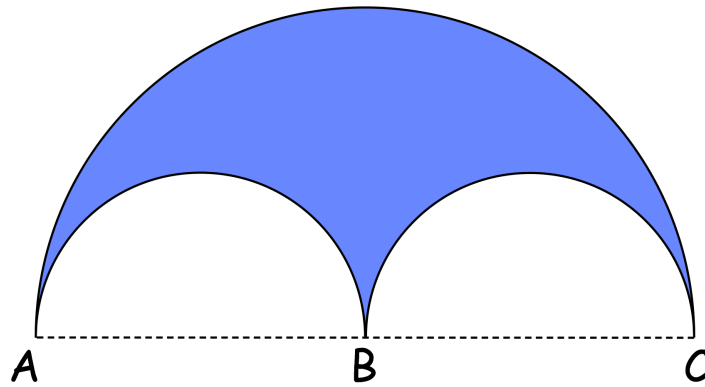
Work out how far Maria has run in total.

.....  
(4)

9. Dexter designs a logo.



He draws a semicircle with diameter, AC, that has a length of 8cm  
He then removes two semicircles, with diameters AB and BC, where B is the midpoint of AC.  
The remaining shape is his logo.



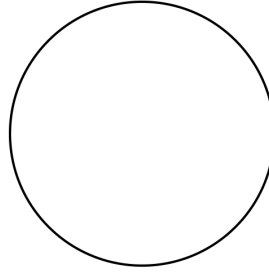
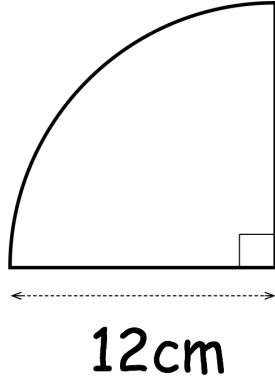
Find the perimeter of the logo.  
Give your answer in terms of  $\pi$

.....cm  
(4)

10. Shown below is a quarter-circle and a circle.



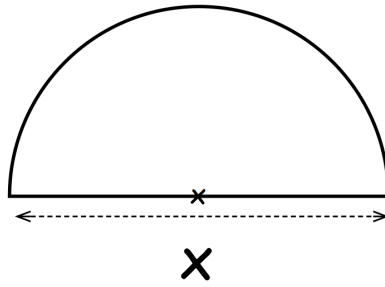
The perimeter of the quarter-circle is the same as the circumference of the circle.



Find the radius of the circle.

.....cm  
**(4)**

11. Below is a semicircle.

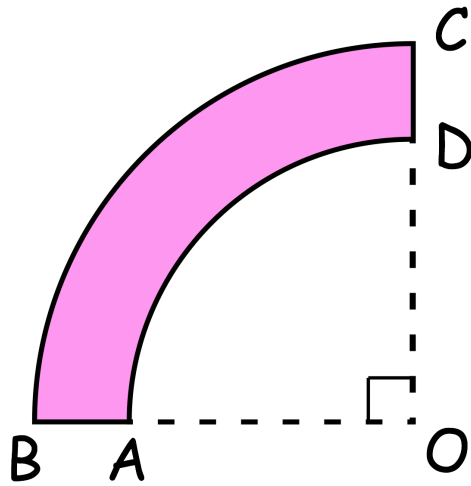


The perimeter of the semicircle is 1 metre.

Find the diameter of the semicircle,  $x$ .

.....  
(4)

12. OAD and OBC are quarter-circles with centre O.



A is a point on the line OB such that  $OA : AB = 5 : 2$

$OC = 1.4\text{m}$

Find the perimeter of shape ABCD

.....  
(4)