Name:

Exam Style Questions

Circumference

Corbettmaths

Equipment needed: Pen, Calculator

Guidance

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

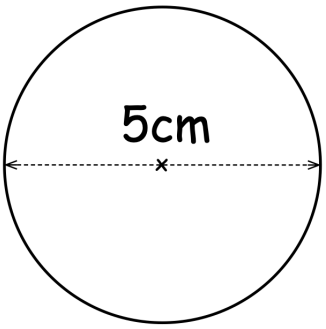
Video Tutorial

www.corbettmaths.com/contents

Video 60

Answers and Video Solutions

1. Shown below is a circle with diameter 5cm.



Calculate the circumference of the circle.
Give your answer to 1 decimal place.

.....cm
(2)

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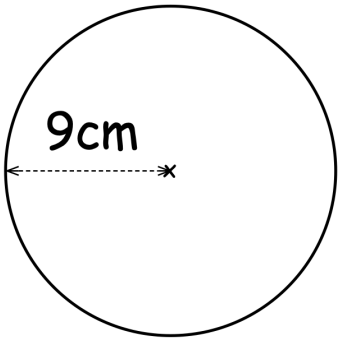
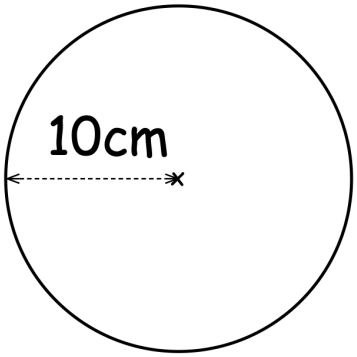
2. Shown below is a circle with radius 9cm.



Work out the circumference of the circle.
Give your answer to 1 decimal place.

.....cm
(2)

3. Shown below is a circle with radius 10cm.



Work out the circumference of the circle.
Give your answer in terms of π

.....cm
(2)

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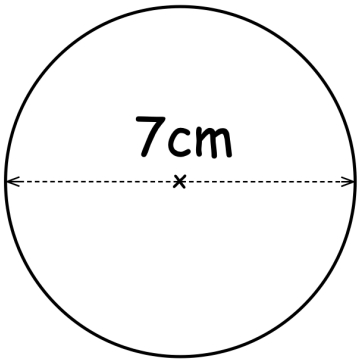
4. Shown below is a circle with diameter 7cm.



Work out the circumference of the circle.
Give your answer in terms of π

.....cm
(2)

5. A circular mirror has a diameter of 1.3m.

Work out the circumference of the mirror.

.....m

(2)

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6. A tin of baked beans has diameter 7.5cm.

What is the circumference of circle with diameter 7.5cm?

.....cm

(2)

7. Use $\pi = 3.14$ to work out the circumference of a circle of diameter 4cm.

.....cm

(2)

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8. A circular plate has circumference of 37.7cm
Calculate the diameter of the plate.

.....cm

(2)

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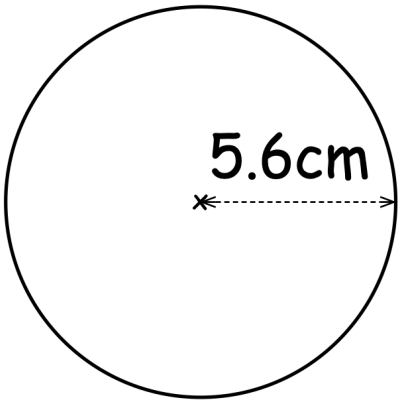
9. A circular pond has radius of 6m.
Calculate the circumference of the pond.

Give your answer in terms of π

.....m

(2)

10. A circle has radius 5.6cm.

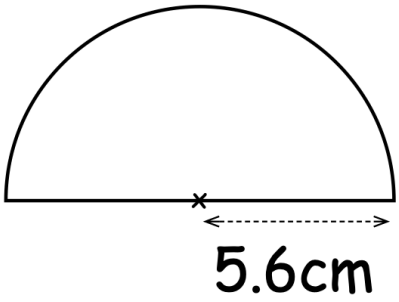


(a) Work out the circumference of the circle.

.....cm

(2)

A semicircle has radius 5.6cm



(b) Work out the perimeter of the semicircle.

.....cm

(2)

11. The circumference of a circle measures 19.5cm.

Work out the length of the diameter of the circle.

.....cm

(2)

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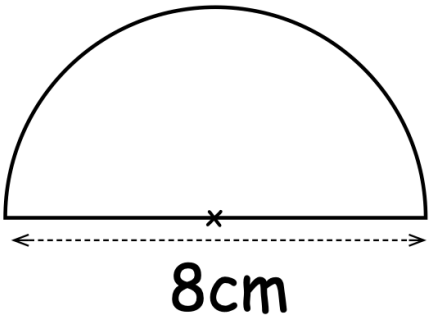
12. A semicircle is shown below.



Work out the perimeter of the semicircle.

.....cm

(3)

13. The circumference of a circle measures 4m.

Work out the length of the radius of the circle.

.....cm

(2)

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14. Georgina has 1 metre of pink ribbon.

She wants to wrap it around a tree trunk with diameter 32 centimetres.

Will she be able to wrap the ribbon around the tree trunk?
Explain your answer.

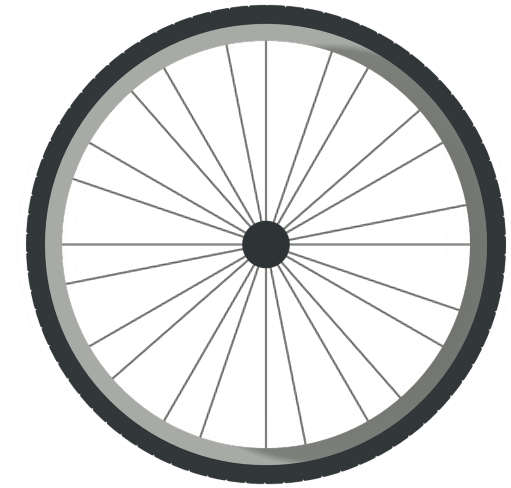
.....

.....

.....

(2)

15. James has a bicycle.
Each wheel has diameter 45cm.



James cycles his bicycle in a straight line in the playground.
The front wheel makes 15 complete revolutions.

How far does the bicycle travel?
Give your answer in metres.

.....m
(4)

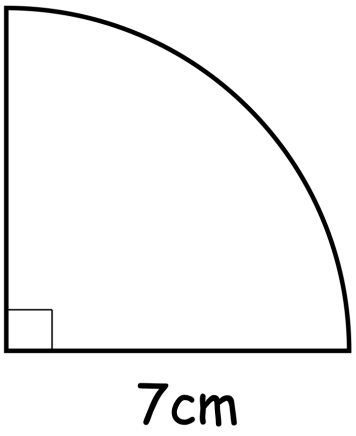
16. A circular wheel has a diameter of 30cm.
The wheel rolls a distance of 60m.

Calculate the number of complete revolutions completed.

.....

(4)

17.

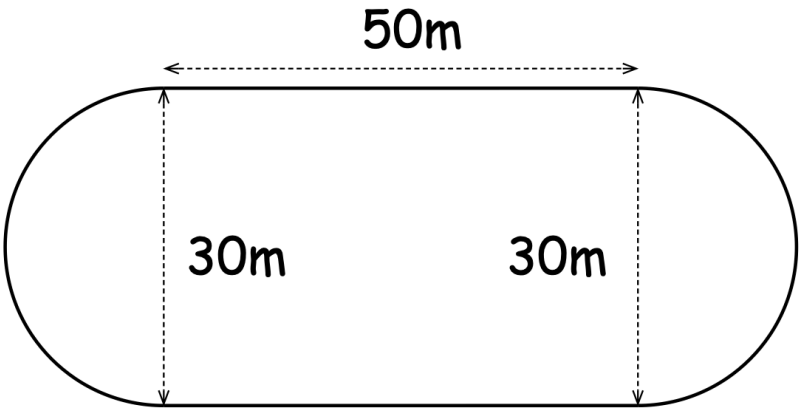


Work out the perimeter of a quarter-circle with radius 7cm.

.....cm

(3)

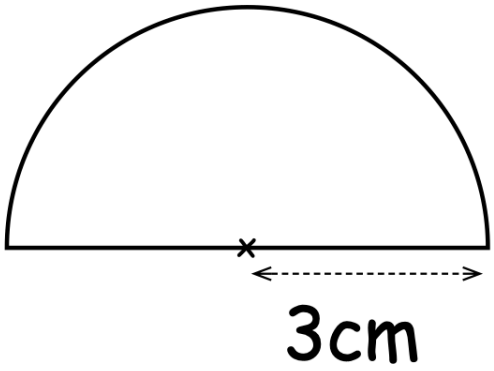
18. A primary school has a running track.
It has two straights of 50 metres.
Also there are two 'bends' that are semicircles with diameter 30 metres.



Work out the distance around the running track.

.....m
(5)

19. Shown is a semicircle with radius 3cm.



Work out the perimeter of the semicircle.
Give your answer in terms of π

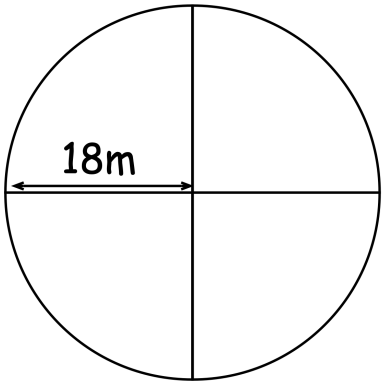
.....cm

(4)

20. Aisling runs a dog kennels.

She has a circular field, with diameter 36m, that she plans to use to let the dogs exercise.

Aisling is going to build a fence around the edge of the field and she also wants to build fences to divide the field into 4 equal sized sectors to keep the dogs separate.



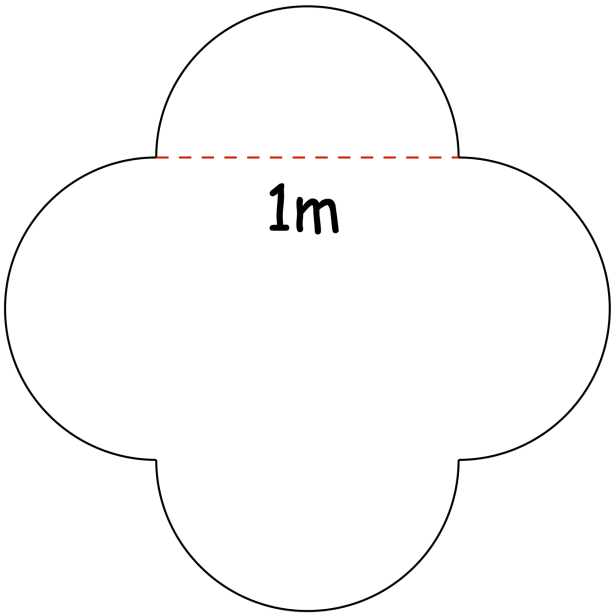
The fence costs £34.85 per metre.

Work out how much the fence should cost Aisling.

.....

(5)

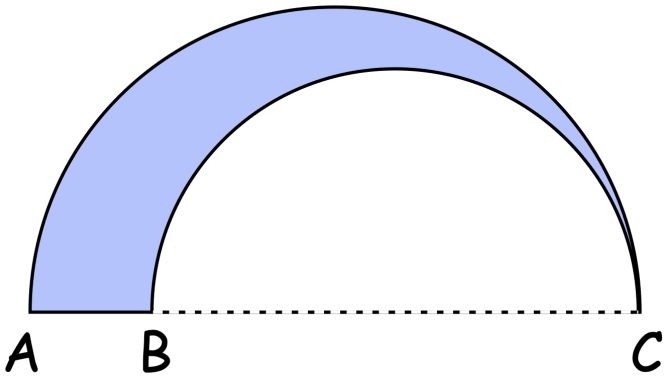
21. Shown is a table top.
It is made from a 1m square and four semicircles.



Calculate the perimeter of the table top.

.....m
(4)

22. Mona designs a logo by removing a semi-circle with diameter BC from a larger semi-circle with diameter AC.



AB = 4cm
BC = 13cm

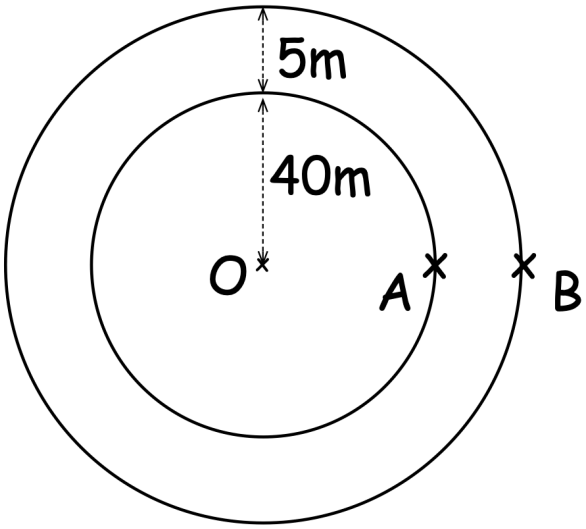
Work out the perimeter of the logo.

.....cm
(4)

23. Andrew and Benjamin run around circular running tracks.

Andrew runs one lap of a track that is a circle with radius 40m, centre O.
He starts and finishes at point A.
Andrew runs at an average speed of 6m/s

Benjamin runs one lap of a track that is a circle with radius 45m, centre O.
He starts and finishes at point B.



Both men start at the same time.
Benjamin finishes 3 seconds before Andrew.

Work out Benjamin's average speed.
Give your answer to 3 significant figures.

…….m/s
(5)