



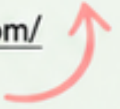
JP Maths

Revision



Attempt the paper
before watching the
solutions!

[https://www.youtube.com/
@JPMathsRevision](https://www.youtube.com/@JPMathsRevision)



FOUNDATION / HIGHER TIER

Area and Circumference of Circles



INSTRUCTIONS

- Use **black ink** or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.



INFORMATION

- The marks for **each** question are shown in brackets– *use this as a guide as to how much time to spend on each question.*



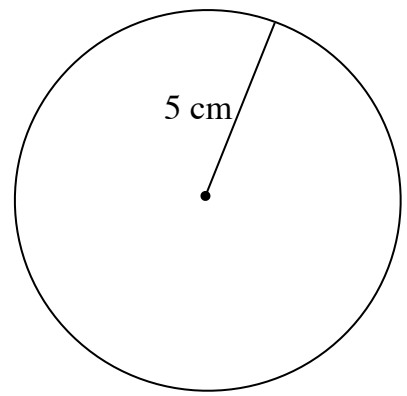
ADVICE

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.



You've got this!

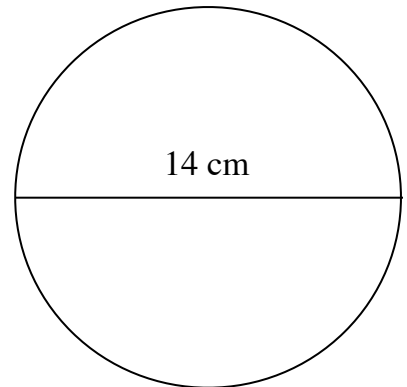
1. A circle has a radius of 5 cm.
- Work out the circumference of the circle.
- Leave your answer in terms of π .



cm

.....
(Total for Question 1 is 2 marks)

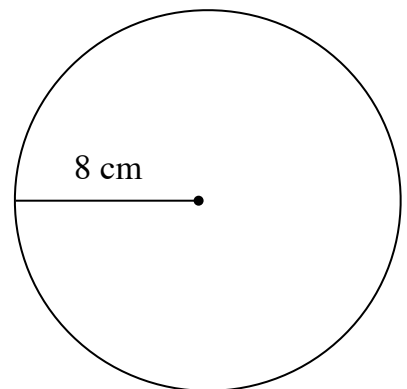
2. A circle has a diameter of 14 cm.
- Work out the area of the circle.
- Leave your answer in terms of π .



cm²

.....
(Total for Question 2 is 2 marks)

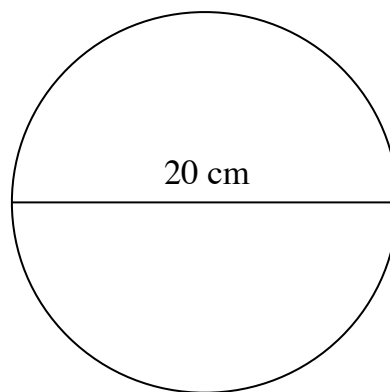
3. A circle has a radius of 8 cm.
- Work out the area of the circle.
- Give your answer to 3 significant figures.



cm²

.....
(Total for Question 3 is 2 marks)

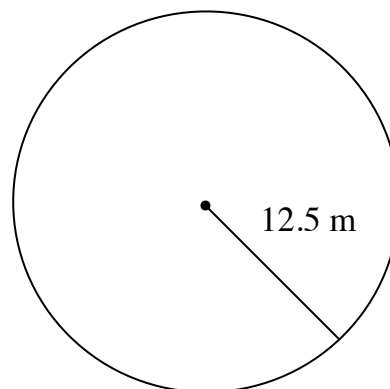
4. A circle has a diameter of 20 cm.
- Work out the circumference of the circle.
- Give your answer to 3 significant figures.



cm

.....
(Total for Question 4 is 2 marks)

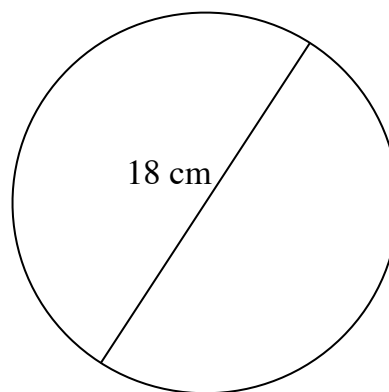
5. A circle has a radius of 12.5 m.
- Work out the circumference of the circle.
- Give your answer to 3 significant figures.



cm

.....
(Total for Question 5 is 2 marks)

6. A circle has a diameter of 18 cm.
- Work out the area of the circle.
- Give your answer to 3 significant figures.



cm²

.....
(Total for Question 6 is 2 marks)

7. The circumference of a circle is 50.3 cm.

Work out the diameter of the circle.

Give your answer to 3 significant figures.

.....
cm

(Total for Question 7 is 3 marks)

8. The area of a circle is 154 cm².

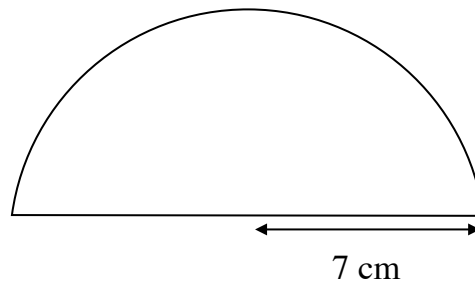
Work out the radius of the circle.

Give your answer to 3 significant figures.

.....
cm

(Total for Question 8 is 3 marks)

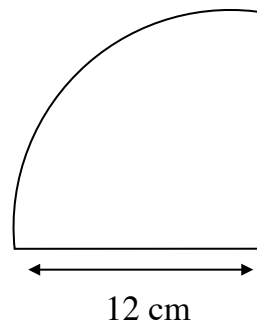
9. A semicircle has a radius of 7 cm.
- Work out the area of the semicircle.
- Give your answer to 3 significant figures.



..... cm²

(Total for Question 9 is 2 marks)

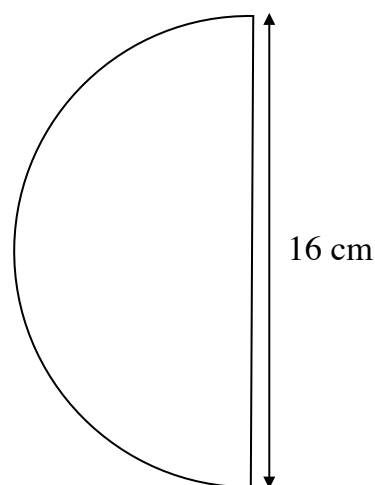
10. A quarter circle has a radius of 12 cm.
- Work out the perimeter of the quarter circle.
- Give your answer to 3 significant figures.



..... cm

(Total for Question 10 is 2 marks)

11. A semicircle has a diameter of 16 cm.
- Work out the perimeter of the semicircle.
- Give your answer to 3 significant figures.



..... cm

(Total for Question 11 is 3 marks)

- 12.** A circular flower bed has a radius of 4.5 m.

The flower bed is covered with soil.

Soil costs £6 per square metre.

Work out the total cost of covering the flower bed.

Give your answer to the nearest penny.

£

.....
(Total for Question 12 is 3 marks)

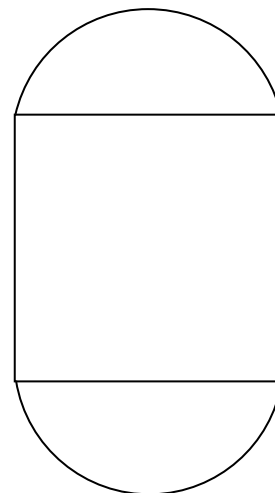
- 13.** A running track is made from a rectangle and two semicircles.

The rectangle is 60 m long and 20 m wide.

The semicircles are attached to the shorter sides of the rectangle.

Work out the total perimeter of the track.

Give your answer to 3 significant figures.



m

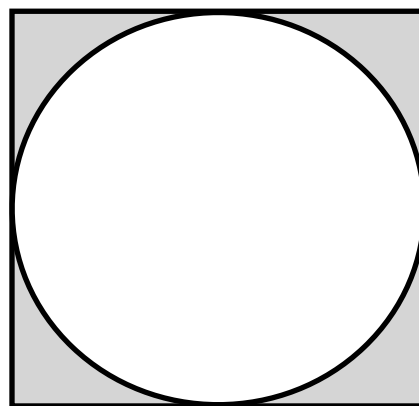
.....
(Total for Question 13 is 3 marks)

- 14.** A square has side length 14 cm.

Inside the square is a circle that touches all four sides of the square.

Work out the shaded area between the square and the circle.

Give your answer to 3 significant figures.



.....
cm²

(Total for Question 14 is 3 marks)
