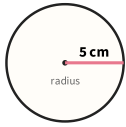


Circumference and Area of a Circle

1

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

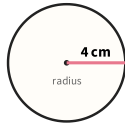
$$C = \pi \times 10 = 31.4 \text{ cm}$$

$$A = \pi \times 5^2 = 78.5 \text{ cm}^2$$

Answer (a) 31.4 cm (b) 78.5 cm²

2

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

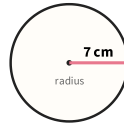
$$C = \pi \times 8 = 25.1 \text{ cm}$$

$$A = \pi \times 4^2 = 50.3 \text{ cm}^2$$

Answer (a) 25.1 cm (b) 50.3 cm²

3

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

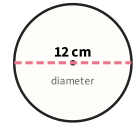
$$C = \pi \times 14 = 44.0 \text{ cm}$$

$$A = \pi \times 7^2 = 153.9 \text{ cm}^2$$

Answer (a) 44.0 cm (b) 153.9 cm²

4

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

$$r = 12 \div 2 = 6 \text{ cm}$$

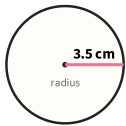
$$C = \pi \times 12 = 37.7 \text{ cm}$$

$$A = \pi \times 6^2 = 113.1 \text{ cm}^2$$

Answer (a) 37.7 cm (b) 113.1 cm²

5

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

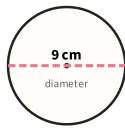
$$C = \pi \times 7 = 22.0 \text{ cm}$$

$$A = \pi \times 3.5^2 = 38.5 \text{ cm}^2$$

Answer (a) 22.0 cm (b) 38.5 cm²

6

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.



$$C = \pi \times d \quad A = \pi \times r^2$$

$$r = 9 \div 2 = 4.5 \text{ cm}$$

$$C = \pi \times 9 = 28.3 \text{ cm}$$

$$A = \pi \times 4.5^2 = 63.6 \text{ cm}^2$$

Answer (a) 28.3 cm (b) 63.6 cm²

7

A bike wheel has a diameter of 60 cm. How far does the bike travel in 10 turns of the wheel? Give your answer in metres to 1 decimal place.

$$\pi \times 60 \times 10 = 1885 \text{ cm}$$

Answer 18.8 m

8

A circle has a circumference of 31.4 cm. Find its radius to the nearest centimetre.

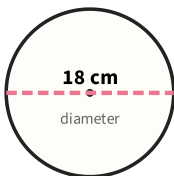
$$31.4 \div \pi \div 2$$

Answer 5 cm

Circumference and Area of a Circle *further practice*

9

Work out (a) the circumference and (b) the area. Give your answers to 1 decimal place.

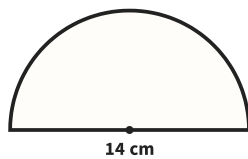


$$r = 9, C = \pi \times 18, A = \pi \times 9^2$$

Answer (a) 56.5 cm (b) 254.5 cm²

10

Work out the area of this semicircle. Give your answer to 1 decimal place.



$$\text{half of } \pi \times 7^2$$

Answer 77.0 cm²

11

A round table has a diameter of 1.2 m. A ribbon goes once round its edge. How long is the ribbon? Give your answer to 1 decimal place.

$$\pi \times 1.2 = 3.770$$

Answer 3.8 m

12

A circle has an area of 78.5 cm². Work out its radius. Give your answer to 1 decimal place.

$$78.5 \div \pi = 24.99, \text{ then } \sqrt{\quad}$$

Answer 5.0 cm

13

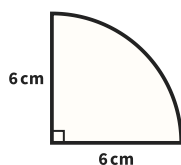
Sam has a strip of card 32 cm long. Is it long enough to go once round a circle with a radius of 5 cm? Show how you know.

$$\pi \times 10 = 31.4 \text{ cm, under } 32 \text{ cm}$$

Answer Yes

14

Work out the perimeter of this quarter circle. Give your answer to 1 decimal place.

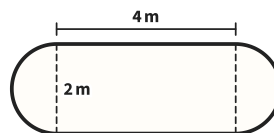


$$\pi \times 12 \div 4 + 6 + 6$$

Answer 21.4 cm

15

A pond is a rectangle with a semicircle on each end. Work out its area. Give your answer to 1 decimal place.



$$4 \times 2 + \text{two halves of } \pi \times 1^2$$

Answer 11.1 m²

16

Mo works out the area of a circle with a diameter of 10 cm. He writes $\pi \times 10^2 = 314.2 \text{ cm}^2$. Explain Mo's mistake and find the right area.

$$\text{he used the diameter: } \pi \times 5^2$$

Answer 78.5 cm²