Circles: Area and Circumference

IGCSE Maths · Grades 9–10 · British and American curriculum · About 25 minutes · 8 questions

Name _____ Date _____ Score / 8

WHAT YOU WILL PRACTISE

- Calculate the circumference of a circle
- Calculate the area of a circle and a semicircle
- Work backwards from a circumference to a radius

WORKED EXAMPLE

A circle has a radius of 3 cm. Find its area to 1 decimal place.

1. Write the formula: area = πr^2.
2. Substitute the radius: area = $\pi \times 3^2 = \pi \times 9$.
3. Calculate: 28.274…
4. Round to 1 decimal place: 28.3 cm^2.

Answer: 28.3 cm^2

Questions

Show your working in the space under each question.

1. A circle has a radius of 5 cm. Find its circumference to 1 decimal place.

2. A circle has a radius of 4 cm. Find its area to 1 decimal place.

© YFCampus · www.yfcampus.com · Free to print for home and classroom use. Not for resale.

3. A circle has a diameter of 12 cm. Find its circumference to 1 decimal place.

4. A circle has a diameter of 10 cm. Find its area to 1 decimal place.

5. A circle has a radius of 7 m. Find its area. Give your answer in terms of π.

6. A circle has a circumference of 62.8 cm. Find its radius to 1 decimal place.

7. A semicircle has a diameter of 8 cm. Find its area to 1 decimal place.

© YFCampus · www.yfcampus.com · Free to print for home and classroom use. Not for resale.

8. A wheel has a diameter of 70 cm. How far does it travel in 10 full turns? Give your answer in metres to 1 decimal place.

Answers: Circles: Area and Circumference

Mark your own work, then go back to any question you got wrong before reading the tutor tip.

Q	QUESTION	ANSWER
1	A circle has a radius of 5 cm. Find its circumference to 1 decimal place.	**31.4 cm**
2	A circle has a radius of 4 cm. Find its area to 1 decimal place.	**50.3 cm²**
3	A circle has a diameter of 12 cm. Find its circumference to 1 decimal place.	**37.7 cm**
4	A circle has a diameter of 10 cm. Find its area to 1 decimal place.	**78.5 cm²**
5	A circle has a radius of 7 m. Find its area. Give your answer in terms of π.	**49π m²**
6	A circle has a circumference of 62.8 cm. Find its radius to 1 decimal place.	**10.0 cm**
7	A semicircle has a diameter of 8 cm. Find its area to 1 decimal place.	**25.1 cm²**
8	A wheel has a diameter of 70 cm. How far does it travel in 10 full turns? Give your answer in metres to 1 decimal place.	**22.0 m**

TUTOR TIP

Check whether you have been given the radius or the diameter before you start. Halve the diameter to get the radius for the area formula.

Stuck on a question? Work through it live with a tutor.

YFCampus offers one-to-one online Maths tutoring matched to your school curriculum. Book a free trial class at **www.yfcampus.com/sa**

Written for students aged 13 to 16 and suitable for Grades 9–10. Check your school's curriculum for the exact order of topics. YFCampus is independent and is not affiliated with any exam board or education ministry.