LESSON MAKER PRO

Circle Connections

Use radius and diameter to find distance around a circle.

GRADE 7 · 7.G.4a

7.G.4a "Investigate the concept of circles. Demonstrate an understanding of the proportional relationships between diameter, radius, and circumference of a circle."

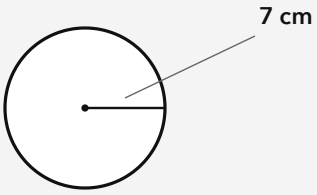
NAME _____ DATE _____

THE CIRCLE RULE

The diameter is twice the radius: $d = 2r$. For every circle, the circumference is π times the diameter: $C = \pi d$.

WORKED EXAMPLE

Find the diameter and circumference of the circle shown.

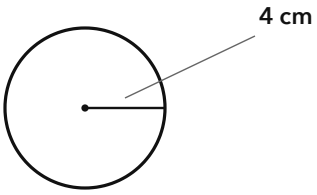


1. $d = 2r$
2. $d = 2(7) = 14$ cm
3. $C = \pi d = \pi(14) = 14\pi$ cm

Answer: Diameter: 14 cm; circumference: 14π cm

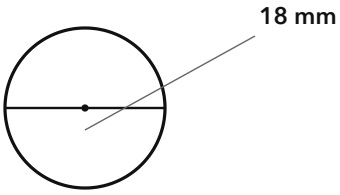
PRACTICE 6 problems

1 Find the circumference of the circle shown.



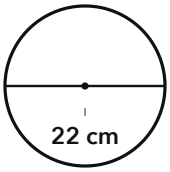
ANSWER _____

2 Find the radius of the circle shown.



ANSWER _____

3 Find the circumference of the circle shown.



ANSWER _____

4 A circle has a circumference of 30π inches. Find its diameter.

ANSWER _____

5 A circle has a radius of 12 m. Find its circumference.

ANSWER _____

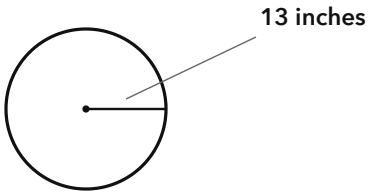
6 A circle has a circumference of 36π cm. Find its diameter and radius.

ANSWER _____

_____

APPLY IT Show your work

1 The circle shows a bike wheel. How far does the bike travel when the wheel makes one complete turn?



ANSWER _____

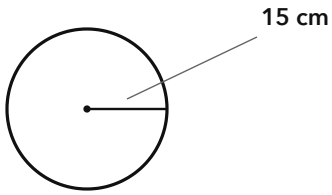
2 A school is putting an LED strip around the edge of a circular dance floor with a diameter of 16 feet. How many feet of LED strip does it need?

WORK SPACE

ANSWER _____

CHALLENGE One step up

One scooter wheel has a circumference of 20π cm. The wheel shown is on a different scooter. In one turn, how many times as far does the shown wheel roll? Explain.



WORK SPACE AND ANSWER

ANSWER KEY

Circle Connections

GRADE 7 · 7.G.4a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the circumference of the circle shown.	**8π cm**
2	Find the radius of the circle shown.	**9 mm**
3	Find the circumference of the circle shown.	**22π cm**
4	A circle has a circumference of 30π inches. Find its diameter.	**30 inches**
5	A circle has a radius of 12 m. Find its circumference.	**24π m**
6	A circle has a circumference of 36π cm. Find its diameter and radius.	**Diameter: 36 cm; radius: 18 cm**

PART 2 · APPLY IT

1. **26π inches** One turn covers one circumference. C = 2π(13) = 26π inches.
2. **16π feet** The strip goes around one circumference, so C = π(16) = 16π feet.

CHALLENGE

The shown wheel rolls 3/2 times as far. Its circumference is 2π(15) = 30π cm, and 30π / 20π = 3/2.

Accept equivalent exact forms, such as 1.5 times for the challenge. Circumference answers must include the correct unit.