LESSON MAKER PRO

Circle Size Link

Use the radius and diameter relationship.

GRADE 6 · 6.MG.1.b.i

6.MG.1.b.i "Investigate and describe the relationship between: diameter and radius;"

NAME _____ DATE _____

RADIUS AND DIAMETER

The radius goes from the center of a circle to its edge. The diameter goes across the circle through the center, so the diameter is 2 times the radius. The radius is half the diameter.

WORKED EXAMPLE

A circle has a radius of 7 cm. Find its diameter.

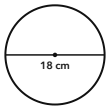


1. Diameter = 2 × radius.
2. Diameter = 2 × 7 cm.
3. Diameter = 14 cm.

Answer: 14 cm

PRACTICE 6 problems

1 A circle has a diameter of 18 cm. What is its radius?



ANSWER _____

2 A circle has a radius of 12 mm. What is its diameter?

ANSWER _____

3 A circle has a diameter of 31 m. What is its radius?

ANSWER _____

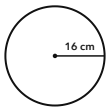
4 A circle has a radius of 4 1/2 in. What is its diameter?

ANSWER _____

5 A circle has a diameter of 40 mm. Find its radius. Then state how the radius compares to the diameter.

ANSWER _____

6 The radius of a circle is 16 cm. Which is longer, the radius or the diameter? Find the difference in their lengths.



ANSWER _____

APPLY IT Show your work

1 A bicycle wheel has a diameter of 28 inches. What is the radius of the wheel?

WORK SPACE

ANSWER _____

2 A round game table has a radius of 15 feet. What is the diameter of the table?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A circle has a radius of x cm. Its diameter is x + 18 cm. Find x, then find the radius and diameter. Explain how you know.

WORK SPACE AND ANSWER

ANSWER KEY

Circle Size Link

GRADE 6 · 6.MG.1.b.i

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A circle has a diameter of 18 cm. What is its radius?	**9 cm**
2	A circle has a radius of 12 mm. What is its diameter?	**24 mm**
3	A circle has a diameter of 31 m. What is its radius?	**15.5 m**
4	A circle has a radius of 4 1/2 in. What is its diameter?	**9 in.**
5	A circle has a diameter of 40 mm. Find its radius. Then state how the radius compares to the diameter.	**20 mm; the radius is half the diameter.**
6	The radius of a circle is 16 cm. Which is longer, the radius or the diameter? Find the difference in their lengths.	**The diameter; 16 cm**

PART 2 · APPLY IT

1. **14 inches** The radius is half the diameter. Divide 28 by 2.
2. **30 feet** The diameter is twice the radius. Multiply 15 by 2.

CHALLENGE

x = 18; radius = 18 cm; diameter = 36 cm. Since the diameter is twice the radius, 2x = x + 18, so x = 18.

Accept equivalent fraction or decimal forms when correct. For the challenge, accept any clear explanation that uses diameter = 2 × radius.