LESSON MAKER PRO

Circle Around Pi

Use diameter to find the distance around a circle.

GRADE 6 · 6.MG.1.b.iii

6.MG.1.b.iii "Investigate and describe the relationship between: diameter and circumference."

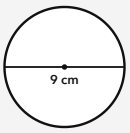
NAME _____ DATE _____

DIAMETER AND CIRCUMFERENCE

A circle's circumference is the distance around it. The circumference equals π times the diameter: C = πd. Use 3.14 for π when a problem asks for a decimal answer.

WORKED EXAMPLE

A circle has a diameter of 9 cm. Find its circumference using π = 3.14.



1. Use C = πd.
2. Substitute: C = 3.14 × 9.
3. Multiply: C = 28.26.

Answer: 28.26 cm

PRACTICE 6 problems

1 A circle has a diameter of 4 cm. Write its circumference in terms of π.

ANSWER _____

2 A circle has a circumference of 36π cm. What is its diameter?

ANSWER _____

3 A circle has a diameter of 12 cm. Find its circumference using π = 3.14.

ANSWER _____

4 A circle has a circumference of 25.12 cm. Find its diameter using π = 3.14.

ANSWER _____

5 Circle A has a diameter of 7 cm. Circle B has a diameter of 11 cm. How much greater is Circle B's circumference? Write your answer in terms of π.

ANSWER _____

6 Circle A has a diameter of 15 cm. Circle B has a circumference of 39.25 cm. Use π = 3.14. Which circle has the greater circumference, and by how much?

ANSWER _____

APPLY IT Show your work

1 A skateboard wheel has a diameter of 8 cm. How far does the wheel roll in one full turn? Use π = 3.14.

WORK SPACE

ANSWER _____

2 The edge of a circular gaming table is 62.8 cm around. What is the table's diameter? Use π = 3.14.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A round garden stepping stone has a diameter of 13 cm. A larger stepping stone has a diameter of 26 cm. Use π = 3.14 to find each circumference. Then explain how doubling the diameter changes the circumference.

WORK SPACE AND ANSWER

ANSWER KEY

Circle Around Pi

GRADE 6 · 6.MG.1.b.iii

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A circle has a diameter of 4 cm. Write its circumference in terms of π.	**4π cm**
2	A circle has a circumference of 36π cm. What is its diameter?	**36 cm**
3	A circle has a diameter of 12 cm. Find its circumference using π = 3.14.	**37.68 cm**
4	A circle has a circumference of 25.12 cm. Find its diameter using π = 3.14.	**8 cm**
5	Circle A has a diameter of 7 cm. Circle B has a diameter of 11 cm. How much greater is Circle B's circumference? Write your answer in terms of π.	**4π cm**
6	Circle A has a diameter of 15 cm. Circle B has a circumference of 39.25 cm. Use π = 3.14. Which circle has the greater circumference, and by how much?	**Circle A, by 7.85 cm**

PART 2 · APPLY IT

1. **25.12 cm** Use C = πd. Multiply 3.14 × 8 to get 25.12 cm.
2. **20 cm** Use d = C / π. Divide 62.8 by 3.14 to get 20 cm.

CHALLENGE

Smaller circumference: 40.82 cm. Larger circumference: 81.64 cm. Doubling the diameter doubles the circumference.

Accept equivalent correct forms using C = πd. For answers requested in terms of π, accept an equivalent multiplication expression, such as π × 4 cm.