LESSON MAKER PRO

Circle Space

Find the area inside a circle.

GRADE 7 · 7.GM.B

7.GM.B "Solve real-world and mathematical problems involving angle measure, circumference, area, surface area, and volume."

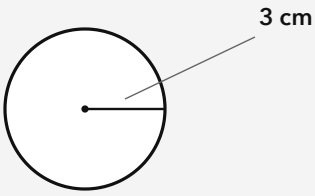
NAME _____ DATE _____

AREA RULE

For a circle, A = pi r^2, where r is the radius. If you know the diameter d, divide it by 2 to find r. Leave pi in your answer.

WORKED EXAMPLE

Find the area of the circle shown.



1. r = 3 cm
2. A = pi × 3^2
3. A = 9pi cm^2

Answer: 9pi cm^2

PRACTICE 4 problems

1 Find the area: r = 4 cm.

ANSWER _____

2 Find the area: d = 10 in.

ANSWER _____

3 Find the area: r = 6 m.

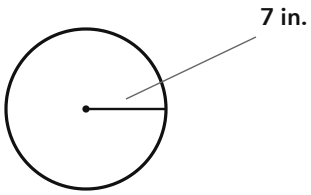
ANSWER _____

4 Find the area: d = 16 ft.

ANSWER _____

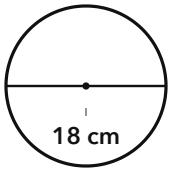
APPLY IT Show your work

1 A pizza has the size shown. What is its area?



ANSWER _____

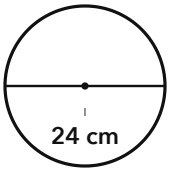
2 A student makes the round sticker shown. How much paper covers its front?



ANSWER _____

CHALLENGE One step up

If you double the diameter shown, how many times as large is the new area? Explain using both areas.



WORK SPACE AND ANSWER

ANSWER KEY

Circle Space

GRADE 7 · 7.GM.B

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area: r = 4 cm.	**16pi cm^2**
2	Find the area: d = 10 in.	**25pi in^2**
3	Find the area: r = 6 m.	**36pi m^2**
4	Find the area: d = 16 ft.	**64pi ft^2**

PART 2 · APPLY IT

1. **49pi in^2** Use the shown radius: A = pi × 7^2 = 49pi in^2.
2. **81pi cm^2** Half of 18 cm is 9 cm, so A = pi × 9^2 = 81pi cm^2.

CHALLENGE

The original radius is 12 cm, so its area is 144pi cm^2. The new radius is 24 cm, so its area is 576pi cm^2. The new area is 4 times as large.

Accept equivalent exact expressions containing pi. In the challenge, accept any explanation that correctly compares the two areas.