LESSON MAKER PRO

Circle Math Moves

Find the space inside and the distance around circles.

GRADE 7 · 7A.GM.B.36.b

7A.GM.B.36.b "Solve area and circumference problems in real-world and mathematical situations involving circles."

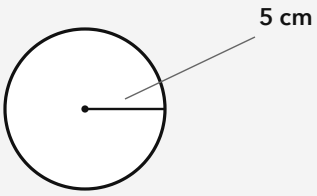
NAME _____ DATE _____

TWO CIRCLE RULES

A radius goes from the center of a circle to its edge. Use $A = \pi r^2$ for area and $C = 2\pi r$ for circumference. If you know the diameter, you can also use $C = \pi d$.

WORKED EXAMPLE

Find the area and circumference of the circle shown.

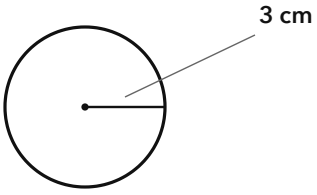


1. Area: $A = \pi r^2$.
2. $A = \pi(5^2) = 25\pi \text{ cm}^2$.
3. Circumference: $C = 2\pi r$.
4. $C = 2\pi(5) = 10\pi$ cm.

Answer: Area = $25\pi \text{ cm}^2$; circumference = 10π cm.

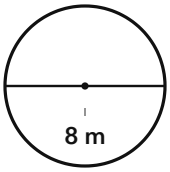
PRACTICE 6 problems

1 Find the area of the circle shown.



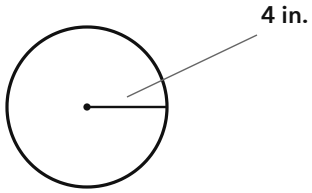
ANSWER _____

2 Find the circumference of the circle shown.



ANSWER _____

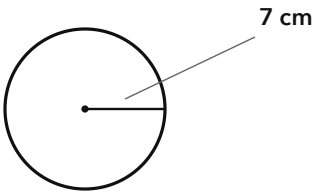
3 Find the area and circumference of the circle shown.



ANSWER _____

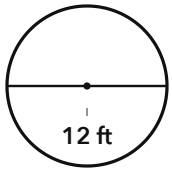
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4 Find the circumference of the circle shown.



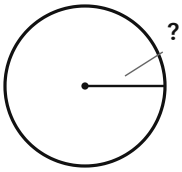
ANSWER _____

5 Find the area of the circle shown.



ANSWER _____

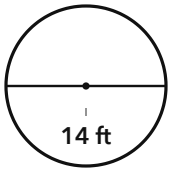
6 The circle shown has a circumference of 18pi cm. Find its radius.



ANSWER _____

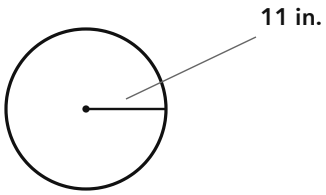
APPLY IT Show your work

1 A skate park is painting a circular logo with the diameter shown. How many square feet will the logo cover?



ANSWER _____

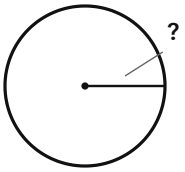
2 A bike wheel has the radius shown. How far does the bike travel when the wheel makes one full turn?



ANSWER _____

CHALLENGE One step up

The circle shown has an area of 64pi cm^2. Find its circumference.



WORK SPACE AND ANSWER

ANSWER KEY

Circle Math Moves

GRADE 7 · 7A.GM.B.36.b

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the area of the circle shown.	**9pi cm^2**
2	Find the circumference of the circle shown.	**8pi m**
3	Find the area and circumference of the circle shown.	**Area = 16pi in.^{2}; circumference = 8pi in.**
4	Find the circumference of the circle shown.	**14pi cm**
5	Find the area of the circle shown.	**36pi ft^2**
6	The circle shown has a circumference of 18pi cm. Find its radius.	**9 cm**

PART 2 · APPLY IT

1. **49pi ft^2** Half of the 14 ft diameter is a 7 ft radius. The area is pi(7^2) = 49pi ft^2.
2. **22pi in.** One full turn moves the bike one wheel circumference. C = 2pi(11) = 22pi in.

CHALLENGE

16pi cm

Accept equivalent exact expressions that include pi. For the challenge, the area gives a radius of 8 cm, so the circumference is 16pi cm.