LESSON MAKER PRO

Circle Measure Mission

Name circle parts and find circle measures.

GRADE 6 · 6.MG.1.a

6.MG.1.a "Identify and describe chord, diameter, radius, circumference, and area of a circle."

NAME _____ DATE _____

CIRCLE PARTS AND MEASURES

A radius goes from the center to the circle. A diameter goes across the center and is twice the radius, while a chord has both endpoints on the circle. Circumference is the distance around a circle, $C = 2\pi r$ or $C = \pi d$, and area is the space inside, $A = \pi r^2$.

WORKED EXAMPLE

Use the circle shown. Find its circumference and area. Use $\pi = 22/7$.

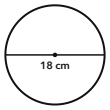


1. $C = 2\pi r$.
2. $C = 2 \times 22/7 \times 7 = 44$ cm.
3. $A = \pi r^2$.
4. $A = 22/7 \times 7^2 = 154$ cm^2.

Answer: Circumference = 44 cm; area = 154 cm^2.

PRACTICE 6 problems

1 The labeled segment in the circle is a diameter. What is the length of the radius?

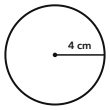


ANSWER _____

2 Name the segment that has endpoints on a circle and passes through the center.

ANSWER _____

3 Use the circle shown. Find its circumference and area in terms of π.



ANSWER _____

4 A circle has a diameter of 12 cm. Find its circumference in terms of π.

ANSWER _____

5 A segment has both endpoints on a circle but does not pass through the center. Is it a radius, diameter, or chord?

ANSWER _____

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

ANSWER _____

APPLY IT Show your work

1 A gaming club makes a round sticker with a radius of 6 cm. What is the area of one sticker in terms of π?

WORK SPACE

ANSWER _____

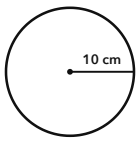
2 At robotics club, a straight strip is placed across a circular floor decal from one edge, through the center, to the opposite edge. The decal has a radius of 9 ft. Name the strip and find its length.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Use the circle shown. A 16 cm segment connects two points on the circle but does not pass through the center. Is that segment a diameter? Explain. Then find the circumference and area of the shown circle in terms of π.



WORK SPACE AND ANSWER

ANSWER KEY

Circle Measure Mission

GRADE 6 · 6.MG.1.a

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The labeled segment in the circle is a diameter. What is the length of the radius?	**9 cm**
2	Name the segment that has endpoints on a circle and passes through the center.	**diameter**
3	Use the circle shown. Find its circumference and area in terms of π.	**Circumference = 8π cm; area = 16π cm^2.**
4	A circle has a diameter of 12 cm. Find its circumference in terms of π.	**12π cm**
5	A segment has both endpoints on a circle but does not pass through the center. Is it a radius, diameter, or chord?	**chord**
6	A circle has a circumference of 30π inches. Find its diameter.	**30 inches**

PART 2 · APPLY IT

1. **36π cm^2** Use $A = \pi r^2$. Substitute 6 for r: $A = \pi \times 6^2 = 36\pi$ cm^2.
2. **diameter; 18 ft** A segment across the center is a diameter. Double the radius: 2 × 9 = 18 ft.

CHALLENGE

No. It is a chord because it does not pass through the center. Circumference = 20π cm; area = 100π cm^2.

Accept equivalent wording for chord, radius, and diameter when the defining feature is correct. Accept answers written with π, and require square units for area.