LESSON MAKER PRO

# Circle Turn Math

*Use 360° to find equal angles.*

**GRADE 4 · 4.GSR.7.2**

**4.GSR.7.2** "Measure angles in reference to a circle with the center at the common endpoint of two rays. Determine an angle's measure in relation to the 360 degrees in a circle through division or as a missing factor problem."

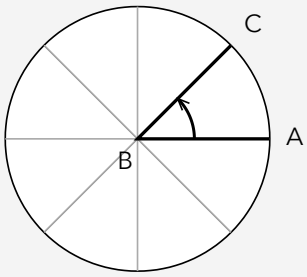
NAME _____ DATE _____

## FULL CIRCLE RULE

One full turn around a center point measures 360°. Divide 360° by the number of equal angles to find one angle. To find how many equal angles fit, find the number that makes angle measure × number = 360°. The vertex is the center. One degree subtends 1/360 of a full circle; n one-degree units subtend n/360. Radius length does not change the angle.

## WORKED EXAMPLE

The angle shown is 1 of 8 equal angles around point B. Find its measure.




Follow the marked counterclockwise turn

1. A full circle measures 360°.
2. Divide 360° by 8.
3. 360° / 8 = 45°.

**Answer: 45°**

## PRACTICE 4 problems

**1** A circle is split into 6 equal angles. What is the measure of each angle?

**ANSWER** _____

**2** An angle measures 40°. How many equal 40° angles make a full circle?

**ANSWER** _____

**3** A full turn is split into 4 equal angles. Find the measure of one angle.

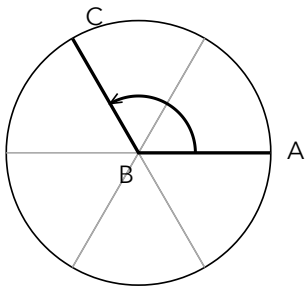
**ANSWER** _____

**4** A circle has 12 equal sections. What is the angle measure of one section?

**ANSWER** _____

## APPLY IT Show your work

**1** A carousel has 6 equal spaces. The angle shown at center B covers 2 spaces. What is its measure?

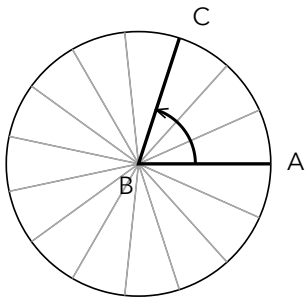



Follow the marked counterclockwise turn

**2** A game wheel has 10 equal prize spaces. What is the angle measure of 3 adjacent spaces?

## CHALLENGE One step up

A round badge has 15 equal slices. The angle shown at B covers 3 slices. What is its measure? Explain your reasoning.




Follow the marked counterclockwise turn

**ANSWER KEY**

# Circle Turn Math

**GRADE 4 · 4.GSR.7.2**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A circle is split into 6 equal angles. What is the measure of each angle? | **60°** |
| 2 | An angle measures 40°. How many equal 40° angles make a full circle? | **9** |
| 3 | A full turn is split into 4 equal angles. Find the measure of one angle. | **90°** |
| 4 | A circle has 12 equal sections. What is the angle measure of one section? | **30°** |

## PART 2 · APPLY IT

1. **120°** Each space measures 360° / 6 = 60°. Two spaces measure 2 × 60° = 120°.
2. **108°** One space measures 360° / 10 = 36°. Three spaces measure 3 × 36° = 108°.

## CHALLENGE

**72°. Each slice is 360° / 15 = 24°, and 3 slices measure 3 × 24° = 72°.**

Accept correct equations such as 360 / 6 = 60. Require a degree symbol for angle measures.