Name _____

Help Practice Buddy Tools Games

Homework & Practice 15-2
Understand Angles and Unit Angles

Another Look!

You can find the measure of an angle using fractions of a circle.

The angle shown is $\frac{2}{5}$ of a circle.

What is the measure of this angle?

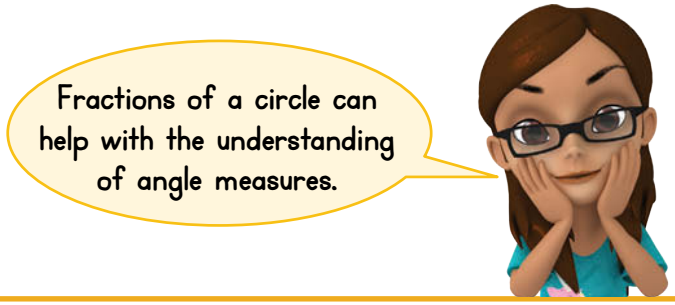
Remember that $\frac{2}{5} = \frac{1}{5} + \frac{1}{5}$.
Divide to find the angle measure of $\frac{1}{5}$ of a circle.

$360° \div 5 = 72°$

An angle that turns through $\frac{1}{5}$ of a circle measures 72°.

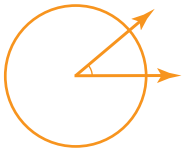
$72° + 72° = 144°$

The measure of this angle is 144°.

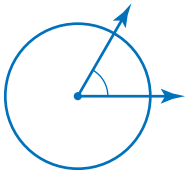


For **1–4**, find the measure of each angle.

1. The angle turns through $\frac{1}{9}$ of the circle.



2. A circle is divided into 6 equal parts. What is the total angle measure of 1 part?

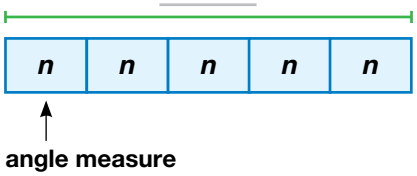


$\frac{1}{6} \times$ _____ = _____

3. A circle is divided into 5 equal parts. What is the total angle measure of 4 parts?

4. A circle is divided into 8 equal parts. What is the total angle measure of 4 parts?

5. **MP.2 Reasoning** Noah used a bar diagram to find the measure of an angle that turns through $\frac{1}{5}$ of a circle. Write an equation to find the measure of the angle.



6. **Number Sense** Miguel cut $\frac{1}{4}$ from a round pie. Mariah cut a piece from the same pie with an angle measure of 60°. Who cut the larger piece? Explain.

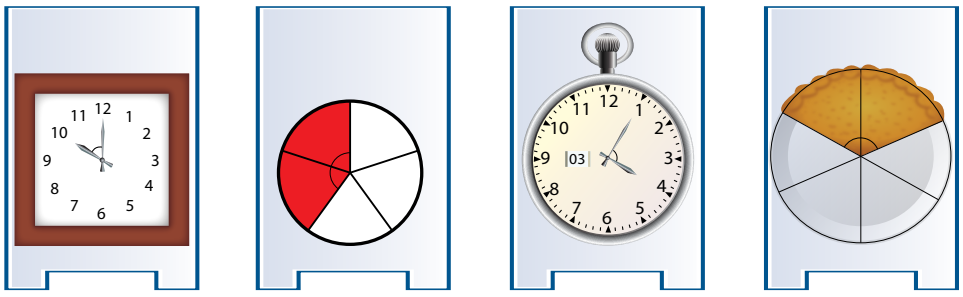
7. **MP.3 Construct Arguments** Janie served 4 same-size pizzas at the class party. Explain how to find how many slices of pizza Janie served if the angle for each slice turns through a right angle.

8. Wendy's older brother is buying a car. He can make 24 payments of $95 or 30 payments of $80 each. Which costs less? How much less?

9. **Higher Order Thinking** A circle is divided into 18 equal parts. How many degrees is the angle measure for each part? How many degrees is the angle measure for 5 of those parts? Break apart 18 to solve. Explain.

Common Core Assessment

10. Draw a line to match the angle in the circle with its angle measure.



90° 120° 144° 60°