Unit 7, Lesson 10

Angle Measurement and Perpendicular Lines

Let's measure all kinds of angles.

Warm-up

Number Talk: Quotients

Find the value of each expression mentally.

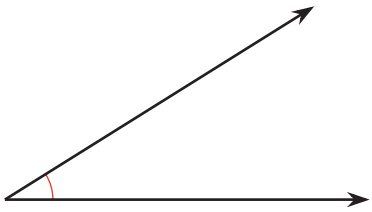
- $180 \div 2$
- $180 \div 4$
- $360 \div 8$
- $360 \div 16$

Activity 1

Angles Here, There, Everywhere

Use a protractor to find the value of each angle measurement in degrees.

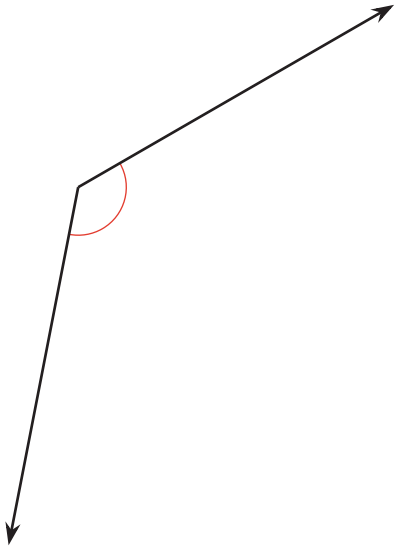
1.



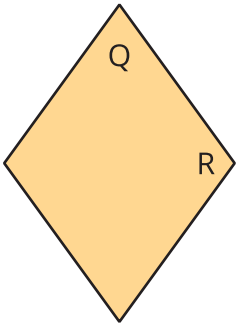
2.



3.



If you have time: Use a protractor to measure the labeled angles in the rhombus.

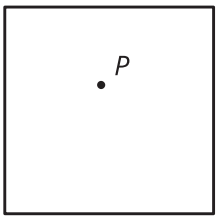


Activity 2

A Folding Challenge

Tyler gives Lin a challenge: "Without using a protractor, draw four 90° angles. All angles have their vertex at point *P*."

Lin folds the paper twice, making sure each fold goes through point *P*. Then she traces the creases.



1. Your teacher will give you a sheet of paper. Draw a point on it. Then show how Lin might have met the challenge.
2. When Lin folds the paper, the creases form a pair of **perpendicular lines**. What do you think "perpendicular lines" mean?

3. Use Lin's method to create a new pair of perpendicular lines through the same point. Trace the creases with a different color.
4. Which shapes have sides that are perpendicular to one another?

   Mark the perpendicular sides. Explain how you know the sides are perpendicular.

