



# Angle Measurement and Perpendicular Lines

Let's measure all kinds of angles.

## Warm-up

### Number Talk: Quotients

Find the value of each expression mentally.

- $180 \div 2$

- $180 \div 4$

- $360 \div 8$

- $360 \div 16$

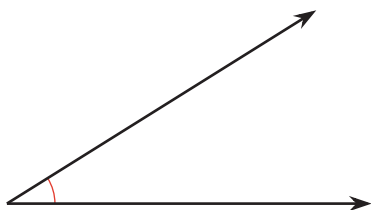


## Activity 1

### Angles Here, There, Everywhere

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

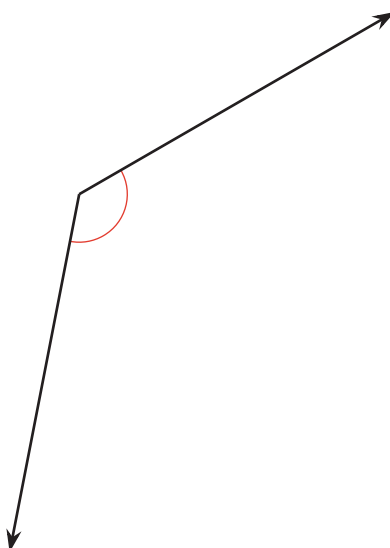
1.



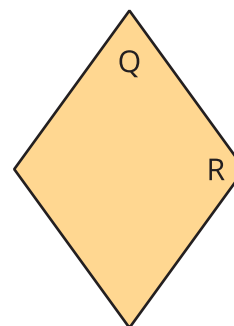
2.



3.



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

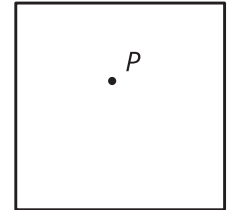


## Activity 2

### A Folding Challenge

Tyler gives Lin a challenge: “Without using a protractor, draw four  $90^\circ$  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.



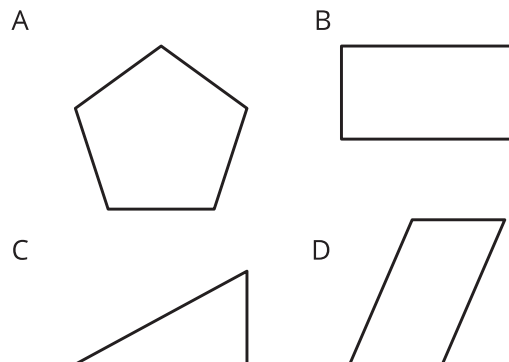
1. Your teacher will give you a sheet of paper. Draw a point on it. Then show how Lin might have met the challenge.
2. When Lin folds the paper, the creases form a pair of **perpendicular lines**. What do you think “perpendicular lines” mean?

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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.



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