## 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.

* $180÷2$
* $180÷4$
* $360÷8$
* $360÷16$

### 10.1: Angles Here, There, Everywhere

1. Use a protractor to find the value of each angle measurement in degrees.
* 
1. Use a protractor to measure the labeled angles in each figure.
* 

### 10.2: A Folding Challenge

Tyler gave Lin a challenge: “Without using a protractor, draw four $90^{∘}$ angles. All angles have their vertex at point $P$.”

Lin folded the paper twice, making sure each fold goes through point $P$. Then, she traced 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 folded the paper, the creases formed 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. Be prepared to explain how you know the lines you created are perpendicular.
4. Which shapes have sides that are perpendicular to one another?
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* Mark the perpendicular sides. Be prepared to explain how you know the sides are perpendicular.



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