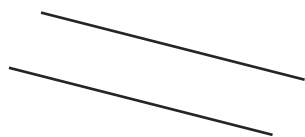


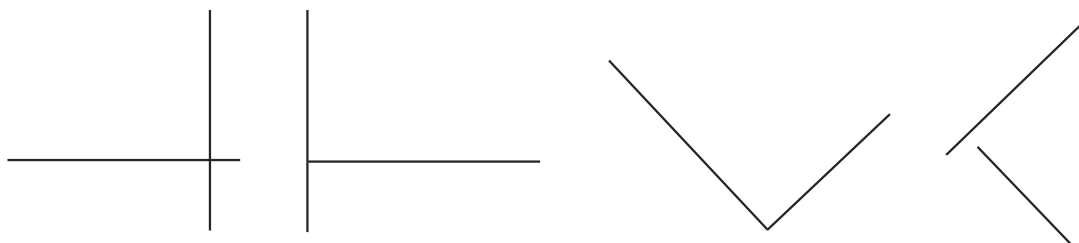
Math Background

Characteristics of Lines and Angles

In order to classify polygons, students need to be familiar with certain characteristics of lines and angles. Parallel line segments run in the same direction, and will never meet, even if extended.

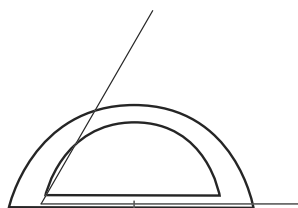


Perpendicular line segments will intersect and form a 90° angle.

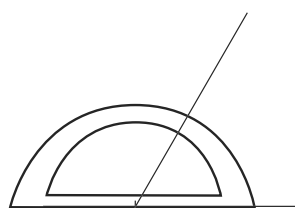


Measuring Angles With a Protractor

In this unit, students will measure angles with a protractor. In order to use a protractor accurately, students need to align the vertex of the angle carefully with the center mark on the protractor and align one ray with the zero line. Some protractors are labeled clockwise *and* counterclockwise. Students should use what they already know about angles to choose which scale to read. Some practice as a class may be useful.



This protractor is not positioned correctly.



Does this angle measure 60° or 120° ?

Building Concepts of Angles

In Lesson 4, students are asked to make a connection between angles as shapes—two line segments and the space between them—and angles as turns—the movement between one position and another. Seeing angles as turns will help students to describe rotational symmetry in Lesson 5.

Circle graphs are commonly used to show data. To read a circle graph, we need to have a fundamental understanding of angles in a circle. To create a circle graph, we also need a sense of proportion. If I survey 72 people, and 360° represents all of them, what angle in the circle represents each person? ($360^\circ \div 72 = 5^\circ$. Each response is represented by 5° on a circle graph.)