Mathematical Background

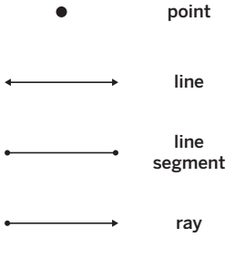
Here is an overview of the content students will learn in this unit.

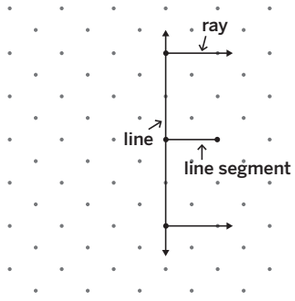
Angles and Properties of Shapes

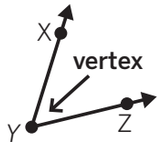
Identify points, lines, line segments, rays, and angles.

TEKS 4.6.A

- Points, **lines**, **line segments**, and **rays** are geometric figures and can be used to compose other two-dimensional figures.
  - » **Angles** are figures made up of 2 rays that share an endpoint, which is called the vertex of the angle.







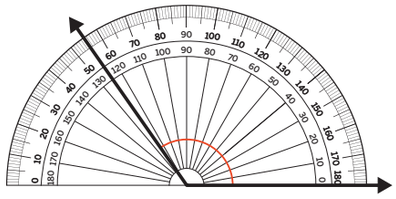
angle *XYZ* or angle *ZYX*

Determine the measures of angles in degrees using a protractor.

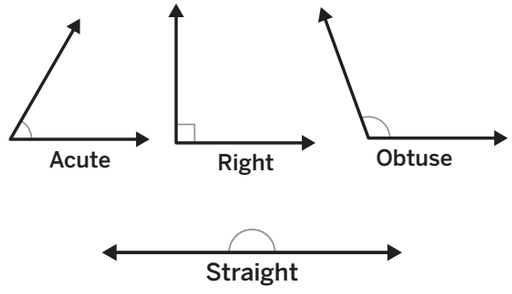
TEKS 4.7.A, 4.7.B, 4.7.C

- A **protractor** is a tool used to accurately measure angles in **degrees**.
  - » The measure of an angle is part of a circle, which measures 360 degrees.
- Angles can be classified by their size.
  - » **Acute angles** measure less than 90°, **obtuse angles** measure more than 90° but less than 180°. **Right angles** measure exactly 90°. **Straight angles** measure exactly 180°.

protractor



The angle is 125°.

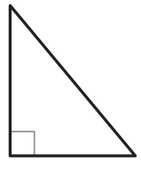


Classify two-dimensional figures.

TEKS 4.6.C, 4.6.D

- Two dimensional figures can be classified by their attributes.
  - » Quadrilaterals can be classified based on the presence or absence of attributes such as **intersecting**, parallel, **perpendicular lines**, side lengths, and angle sizes.
  - » Triangles can be classified as **acute**, **right**, or **obtuse triangles** based on their angle measures.

- This is a rectangle because:
  - » It is a quadrilateral
  - » Adjacent sides are perpendicular and create a right angle.
  - » Opposite sides are parallel and equal in length.



- This is a right triangle because:
  - » the largest angle is a right angle
  - » there are 2 acute angles

Unit Investigation

Lesson 1 is the Unit Investigation. Students draw and describe geometric figures to build curiosity and apply their own knowledge in a variety of ways. Use the **Caregiver Connection** to help students continue to explore the math they will see in the unit.

Caregiver Connection

Students may enjoy drawing geometric images, or designs with multiple shapes and lines, at home with a partner. Have students describe their drawing to another person so they could recreate it.