

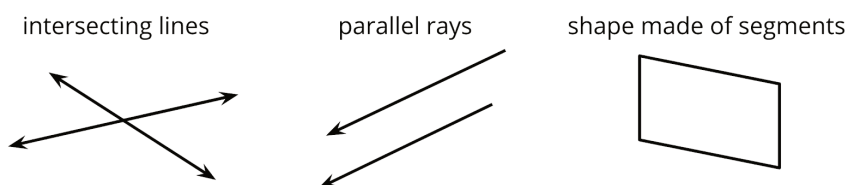
Family Support Materials

Angles and Angle Measurement

In this unit, students learn new language for describing parts of geometric figures and practice identifying and drawing them. They also learn to talk about angles, measure their size, and draw angles of different measurements.

Section A: Points, Lines, Segments, Rays, and Angles

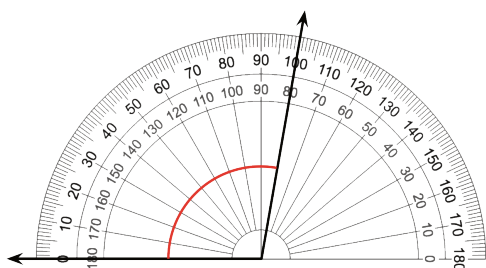
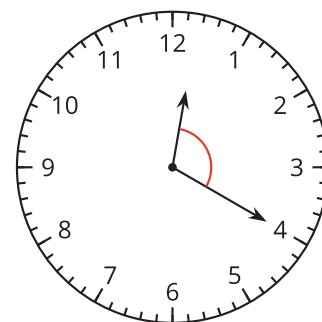
This section introduces students to some building blocks of geometric figures—points, rays, segments, angles, and lines. Students learn about parallel lines (lines that never intersect) and perpendicular lines (lines that meet or intersect at a right angle).



They also learn that an angle is a figure that is made up of two rays that share the same endpoint, called the vertex of the angle. Students practice identifying angles, noticing that angles are all around us and can have different sizes.

Section B: The Size of Angles

In this section, students compare and describe the size of angles. They begin by comparing angles visually, for example, by considering ways to describe the size of angles on a clock. The hands of a clock help to show that an angle is formed when one ray rotates around a point shared with another ray.



Students then learn that angles can be measured, with degrees ($^{\circ}$) as the unit of measurement, and that a ray that makes a full turn around a point makes a 360-degree angle.

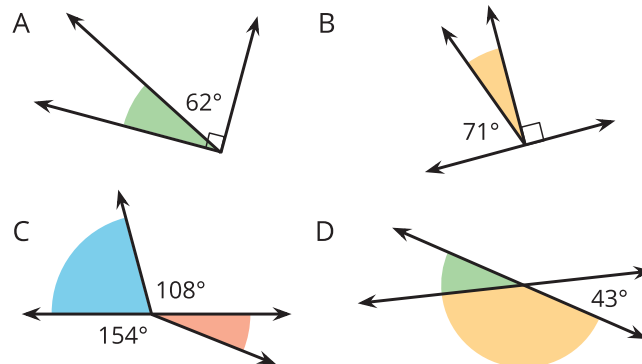
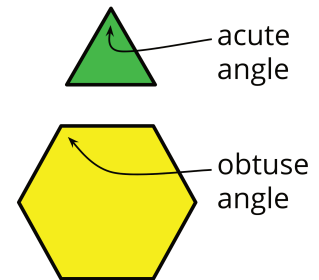
Later in the section, students learn to use a protractor to measure angles and to draw angles.

Section C: Angle Analysis

In this section, students continue to draw and analyze angles and to reason about their measurement. They classify angles by their size and identify angles as right, acute, obtuse, and straight.

Students learn that angles can be added. To investigate this idea, they use paper cutouts, patty paper, and drawings. Students fold, cut, mark, and assemble pieces of paper to see how angles can be composed (put together) and decomposed (broken apart).

Later, students solve problems and find unknown angle measurements in different contexts.



Try it at home!

Near the end of the unit, ask your student to:

- Find an acute angle, obtuse angle, straight angle, right angle, and parallel and perpendicular lines around the house.
- Describe and measure some angles found around the house.

Questions that may be helpful as they work:

- How would you describe that figure? How do you know it is a ____ ?
- How does that angle compare to a right angle (or a straight angle)?