Grade 4 Module 4

Tips for Families

Key Concepts Overview

Focus TEKS: **4.6A, 4.6B, 4.6C, 4.6D, 4.7A, 4.7B, 4.7C, 4.7D, 4.7E**

The focus of Module 4 is introducing points, lines, line segments, rays, and angles, as well as the relationships between them, and then applying that new understanding to classify figures and solve problems. Your student will:

- ☐ Identify and draw **points**, **lines**, **line segments**, **rays**, **angles**, **perpendicular** lines, and **parallel** lines.
- ☐ Determine whether an angle is an **acute angle**, a **right angle**, or an **obtuse angle**.
- ☐ Use **protractors** to measure and construct angles and record the measurements in **degrees**.
- ☐ Interpret and explore quarter (90°) turns.
- ☐ Compose angles of different measures by using pattern blocks.
- ☐ Determine unknown angle measurements mathematically and then use a protractor to verify the measurements.
- ☐ Find and draw **lines of symmetry**.
- ☐ Identify, classify, and draw **acute**, **right**, and **obtuse triangles**.
- ☐ Name quadrilaterals, identify attributes (i.e., characteristics) that define them, and construct them based on given attributes.

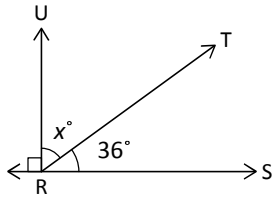
You can use the checklist above to help monitor your student's progress of the knowledge and skills in this module. Daily sample problems with solutions and thought bubbles are found in the Homework Helper pages in the Succeed Student Edition to help you support your student as they work at home.

Additional Ways to Help at Home

- With your student, look around for acute, right, and obtuse angles and for perpendicular and parallel lines. You'll likely discover that right angles, perpendicular lines, and parallel lines are the simplest to find! You might find acute and obtuse angles on clocks, on the molding around windows and doors, on windows that crank open, and on hinged picture frames, among other places.
- Using a straightedge, such as a ruler, take turns with your student drawing angles on a piece of paper. Make a game of it. After drawing an angle, you and he both guess how many degrees the angle measures. Measure the angle with a protractor to see whose guess was closer.
- Practice with your student making quarter-turns with your bodies. Stand and face the same wall. Next, close your eyes. Take turns giving a directive to turn 90°, 180°, 270°, or 360° to the right or left. After each turn, open your eyes to see whether you are both facing the same wall. If you are not, discuss who is facing the correct direction.
- Prompt your student to lay two pieces of uncooked spaghetti on a piece of paper so they intersect at their midpoints. (She may want to tape the pieces down so they don't move.) Next, direct her to use a protractor to measure any one of the angles. Finally, ask her to determine the measure of the other three angles mathematically.

Terms

Adjacent angle (Ángulo *adyacente*): two angles with the same vertex that share a ray and do not overlap (e.g., $\angle URT$ and $\angle TRS$ are adjacent angles)



Arc (*Arco*): a portion of the circumference of a circle; an arc can be used to mark an angle

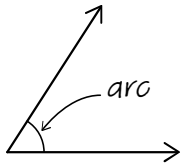
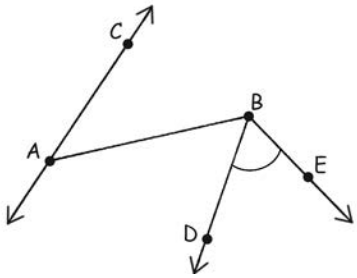
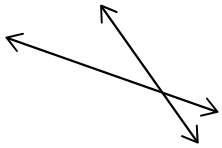


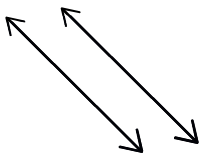
Figure (*Figura*): a set of points in the plane



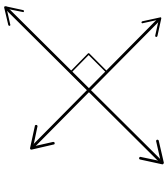
Intersecting lines: lines that contain at least one point in common



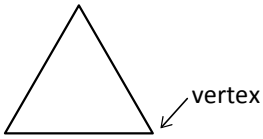
Parallel (*Paralelo*): two lines in a plane that do not intersect and are always the same distance apart; line segments or rays are parallel if the lines containing them are parallel



Perpendicular (*Perpendicular*): two lines that intersect if the angles formed between the lines are right angles; line segments or rays are perpendicular if the lines containing them are perpendicular

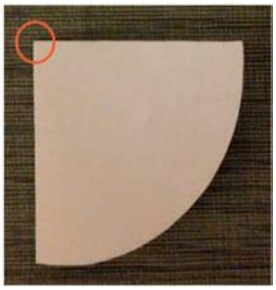


Vertex (*Vértice*): a point where two lines, line segments, rays, or sides meet

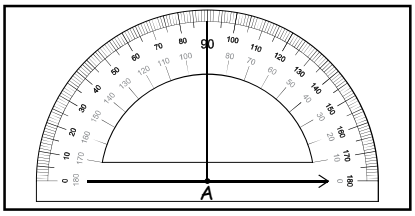


Models

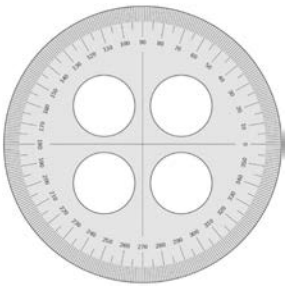
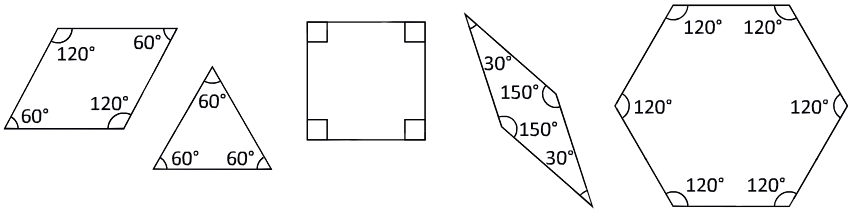
Right Angle Template



180° Protractor



360° Protractor



Pattern -Blocks