

## Grade 4 Mathematics Unit Preview Quarter 3: Geometry

Objectives: (Your student will be able to)

- **Identify/describe points, lines, line segments, and rays.**
- **Identify/construct intersecting, parallel, and perpendicular lines, and line segments.**
- **Identify/classify angles as acute, obtuse, right, and straight.** For example, an **acute angle** measures less than  $90^\circ$ , an **obtuse angle** measures greater than  $90^\circ$ , and a **right angle** measure exactly  $90^\circ$ .
- **Identify/describe symmetry in geometric figures.**
- **Compare two- and three- dimensional figures by following attributes: sides, angles, edges, vertices, and faces.**
- **Identify and name polygons and quadrilaterals.** For example, a **polygon** is a many-sided, closed figure. A **quadrilateral** is a four-sided polygon. A **square** is a quadrilateral with four corners that are right angles, two sets of parallel sides, and all sides are equal.
- **Identify/model transformations: translations (slides), reflection (flips), and rotations (turns).**
- **Identify/describe congruency and similarity of geometric figures and real-world objects.** For example, **congruent**: same size, same shape; **similar**: same shape, not necessarily the same size.
- **Identify the ordered pair for a point and locate the point for an ordered pair in the first quadrant of a coordinate grid.**

Vocabulary: (Words your student will need to understand)

• <b>Point:</b> an exact position or location	• <b>Faces:</b> A flat surface of a solid figure.
• <b>Line:</b> A straight path extending in both directions with no endpoints.	• <b>Ray:</b> A part of a line, with one endpoint, that continues without end in one direction.
• <b>Intersecting Lines:</b> Lines that cross at exactly one point	• <b>Parallel Lines:</b> Lines in a plane that never intersect.
• <b>Perpendicular Lines:</b> Lines that intersect to form right angles.	• <b>Angles:</b> The figure formed when two rays or line segments share the same endpoint.
• <b>Symmetry:</b> When one half of a figure looks like the mirror image of the other half.	• <b>Edge:</b> The line segment where two faces of a solid figure meet.
• <b>Vertex (Vertices):</b> In an angle, the endpoint where two rays meet.	• <b>Ordered Pair:</b> A pair of numbers used to locate a point on a coordinate grid
• <b>Coordinate Grid:</b> A plane formed by two perpendicular lines in which every point is assigned and ordered pair of numbers.	• <b>Line Segment:</b> A part of a line that includes two points, called endpoints, and all the points between them.

Activities to do with your student (on back)



Activities to do with your student (in addition to homework, optional):

- Name polygons and find examples at home.
- Identify, describe, and classify different household objects as solid figures.
- Explore the area and volume of a cereal box.
- Identify real world angles as acute, right, or obtuse.
- Draw shapes. Identify their angles as obtuse, acute, and right angles.
- Draw pictures with intersecting lines, perpendicular lines, and parallel lines.
- Draw three-dimensional shapes and label the faces, vertices, and edges.
- Use a ruler to find a perimeter of plane figures.
- Use tangrams to make plane figures.
- Use shapes or objects to demonstrate flips, slides, or turns.
- Use tangrams to flip, slide, or turn plane figures.
- Practice multiplication and division facts.