EUREKA MATH™ TIPS FOR PARENTS

KEY CONCEPT OVERVIEW

In Lessons 1 through 6, students use number lines to explore and develop the concept of a **coordinate plane**, focusing only on the **first quadrant**.

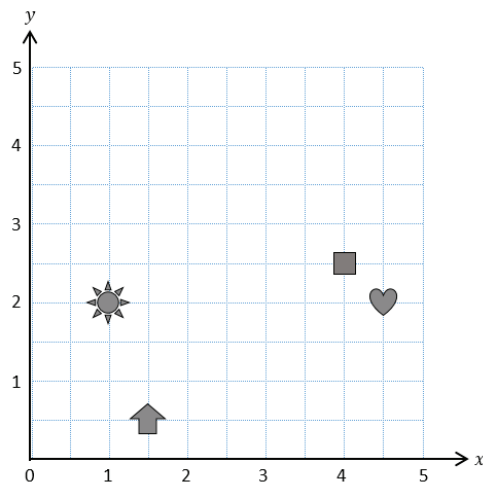You can expect to see homework that asks your child to do the following:

- Plot and label shapes and points on number lines.
- Identify the locations of shapes and plot shapes on coordinate planes.
- Construct x- and y-**axes** and label numbers along both axes to create coordinate planes.
- Plot and label **coordinate pairs** and points on coordinate planes.
- Construct and identify **perpendicular lines** and **parallel lines** to both axes of a coordinate plane.

SAMPLE PROBLEM *(From Lesson 2)*

Use the coordinate plane to answer the following.

a. Name the shape at each location.

x-coordinate	y-coordinate	Shape
1	2	*sun*
4	$2\frac{1}{2}$	*square*
$4\frac{1}{2}$	2	*heart*
$1\frac{1}{2}$	$\frac{1}{2}$	*arrow*

b. Which two shapes have the same y-coordinate?

sun and heart

c. What shape is $2\frac{1}{2}$ units from the x-axis?

square

Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at GreatMinds.org.

For more resources, visit » *Eureka.support*

HOW YOU CAN HELP AT HOME

- Play the game Battleship with your child. The directions, rules, and template are in the Lesson 4 Problem Set.

- Practice plotting coordinate pairs with your child. You say the coordinate pairs, and your child plots them on a coordinate plane. You may use the coordinate plane template from either Lesson 2 or Lesson 6.

TERMS

Axis: A fixed reference line for the measurement of coordinates.

Coordinate pair: Two numbers that identify a point on a plane. Coordinate pairs are written (x, y), where x represents a distance from 0 on the horizontal x-axis and y represents a distance from 0 on the vertical y-axis. For example, $(3, 10)$ is a coordinate pair.

Parallel lines: Two lines in a plane that do not intersect. Parallel lines can be denoted as $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$.

Perpendicular lines: Formed by two lines, line segments, or rays intersecting to form a 90 degree angle and denoted by the symbol $\perp$. For example, $\overleftrightarrow{AB} \perp \overleftrightarrow{CD}$ represents the perpendicular lines AB and CD.

x-coordinate: The horizontal value in a coordinate pair. The x-coordinate is always written first in an ordered pair of coordinates (x, y). For example, in $(9, 2)$, the value 9 is the x-coordinate.

y-coordinate: The vertical value in a coordinate pair. The y-coordinate is always written second in an ordered pair of coordinates (x, y). For example, in $(9, 2)$, the value 2 is the y-coordinate.

MODELS

First Quadrant of the Coordinate Plane