

FAMILY MATH

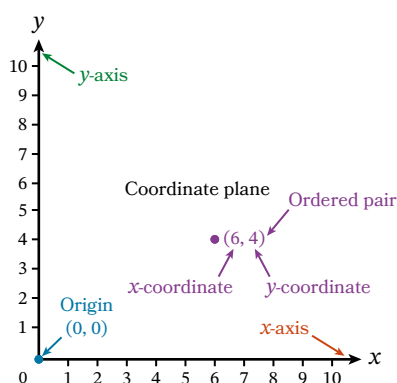
Coordinate Systems

Dear Family,

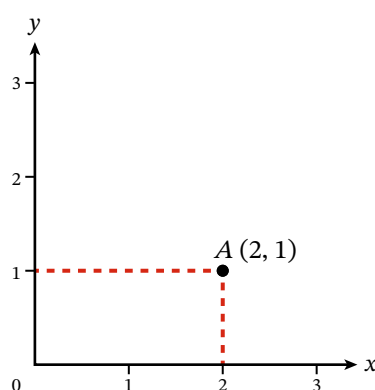
Earlier this year and in previous grades, your student worked with vertical and horizontal number lines. Now, they are ready to plot points in the coordinate plane. They are familiar with using a coordinate, or a number, to describe the location of a point on a number line. To describe the location of a point that is not on a line, your student learns that they can use two perpendicular number lines, called axes, to create a coordinate plane. They see that with two number lines, they have to use two coordinates, called an ordered pair. Students construct coordinate planes, plot and label points, and answer questions about the locations of points in the coordinate plane.

Key Terms

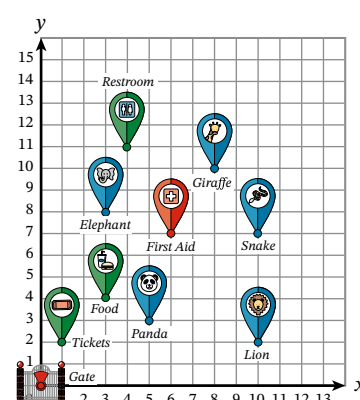
axes	origin
coordinate	x-axis
coordinate plane	x-coordinate
coordinate system	y-axis
ordered pair	y-coordinate



In a coordinate plane, the horizontal number line is called the x-axis and the vertical number line is called the y-axis. The place where the number lines intersect at 0 is called the origin. Ordered pairs are used to name the location of points in the coordinate plane.



The first coordinate in an ordered pair is called the x-coordinate. The x-coordinate identifies the point's horizontal distance from the y-axis. The second coordinate in the ordered pair is called the y-coordinate. The y-coordinate identifies the point's vertical distance from the x-axis.



Students engage with a coordinate plane that represents a map. They use direction words such as left and right, west and east, up and down, and north and south to describe moving between points in the plane.

At-Home Activities

Axis Jumping Jacks

Do jumping jacks with your student to help them remember which axis on the coordinate plane is the x -axis and which axis is the y -axis. With your student, stand with arms outstretched to the side, parallel to the ground and legs spread wide. Your arms represent the horizontal x -axis. Say, “The x -axis goes side to side.” Then, jump your feet together and raise your arms straight overhead. Your body represents the vertical y -axis. Say, “The y -axis goes up and down.” Jump back and forth between these positions 5 to 10 times, saying “X” and “Y” as you do. Repeat as often as you like.

North, East, South, and West

Help your student use directional words in their everyday life. Use a map or the location of the sun to help your student find north. Then, moving clockwise, identify east, south, and west. Ask your student to figure out which direction they travel between familiar locations, such as between home and school, home and a friend’s house, or home and a store.