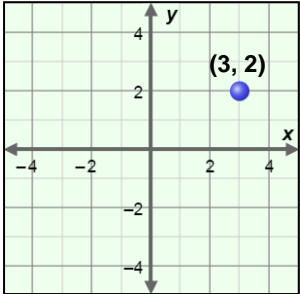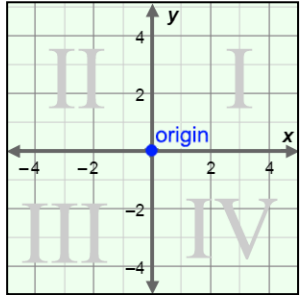# Vocabulary: Points in the Coordinate Plane

**Vocabulary**

- Coordinate plane – the plane defined by a pair of perpendicular number lines, or *axes*, that intersect at a point called the *origin*.

- Coordinates – a set of numbers that names the location of a point.

  - In the two-dimensional coordinate plane, it takes two numbers ($x$, $y$) to specify a location.

    - The $x$-coordinate gives the location of the point left or right of the origin.

    - The $y$-coordinate gives the location of the point above or below the origin.

    - For example, the coordinates of the point shown to the right are (3, 2).

- Ordered pair – two numbers or variables written in a certain order.

  - ($x$, $y$) coordinates, such as (3, 2), are examples of ordered pairs.

- Origin – the point in a coordinate plane where the $x$- and $y$-axes intersect.

  - The coordinates of the origin are (0, 0).

  - The origin is the point labeled on the graph to the right.

- Quadrant – one of four regions defined by the $x$- and $y$-axes of the coordinate plane.

  - The four quadrants, labeled in the graph above, are numbered with Roman numerals: I, II, III, and IV.

- Reflect – to form a "mirror image" by flipping a point or object across a line.

  - In the image to the right, the point on the left has been reflected over the $y$-axis to form the image on the right.

- $x$-axis – a horizontal number line that passes through the origin of the coordinate plane.

  - The $x$-axis measures position left or right of the origin.

- $y$-axis – a vertical number line that passes through the origin of the coordinate plane.

  - The $y$-axis measures position above or below the origin.