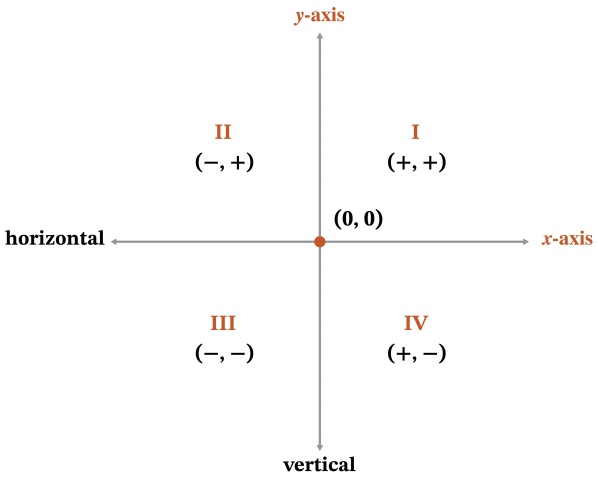
The Coordinate Plane

Fill in the guided notes as you watch the video in the Digital Toolbox.

- The **coordinate plane** is made up of a horizontal number line and a vertical number line.
  - The horizontal number line is the ***x*-axis**.
  - The vertical number line is the ***y*-axis**.
- The **origin** $(0, 0)$ is the name of the point where the x- and y-axes intersect.
- The axes separate the coordinate plane into four quadrants.
  - Quadrant I : $(+x, +y)$
  - Quadrant II: $(-x, +y)$
  - Quadrant III: $(-x, -y)$
  - Quadrant IV: $(+x, -y)$



- An x- and y-coordinate written as a pair (x, y), form a single **point** on the coordinate plane.
- To plot a point on the coordinate plane:
  - Locate where the x-coordinate and y-coordinate **intersect**.
  - Mark the location with a **closed point**.

Example 1

Complete the example as you watch the video in the Digital Toolbox.

A) Name the coordinates of each point.

A **(–4, 3)**

B **(2, 1)**

C **(–3, –3)**

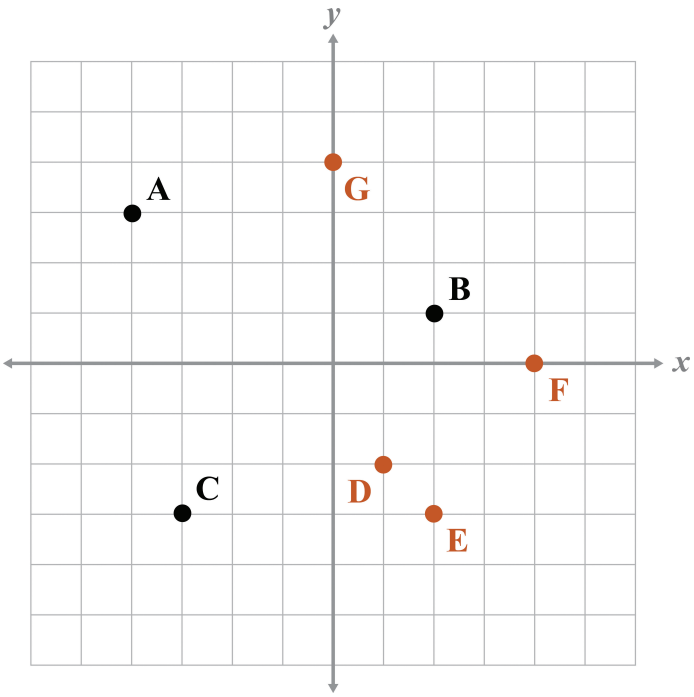
Plot the points.

D (1, –2)

E (2, –3)

F (4, 0)

G (0, 4)



B) Find the distance between points B and E.

4 units

C) Find the distance between points C and E.

5 units

Practice

1) Name the marked points that form the letter "A" on the coordinate plane.

(–5, –6), (–2, 1), (1, –6), (0, –3), (–4, –3)

2) Determine the distance between the connected horizontal points in the letter "A."

(–4, –3) to (0, –3) has a distance of 4 units

Graph the points in order. Connect the points with line segments until you reach the word STOP. Then start a new figure.

3)
(–8, 7)
(–8, 2)
(–7, 0)
(–5, 0)
(–4, 2)
(–4, 7)
STOP

4)
(2, 0)
(2, 7)
(6, 7)
(7, 6)
(7, 5)
(6, 4)
(7, 0)
STOP

5)
(2, 4)
(6, 4)
STOP

6)
(6, –6)
(8, 0)
(10, –6)
(5, –2)
(10, –2)
(6, –6)
STOP