

Section P.7 Graphical Representation of Data

Objective: In this lesson you learned how to plot points in the coordinate plane and use the Distance and Midpoint Formulas.

Course Number

Instructor

Date

Important Vocabulary

Define each term or concept.

Rectangular coordinate system

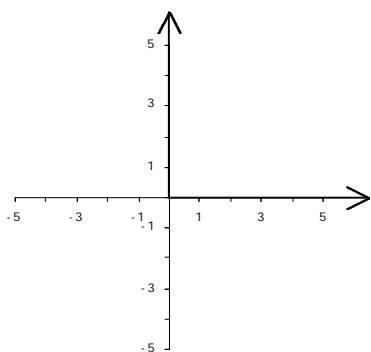
Cartesian plane

Ordered pair

I. The Cartesian Plane (Pages 60–61)

On the Cartesian plane, the horizontal real number line is usually called the _____, and the vertical real number line is usually called the _____. The origin is the _____ of these two axes, and the two axes divide the plane into four parts called _____.

On the Cartesian plane shown below, label the x -axis, the y -axis, the origin, Quadrant I, Quadrant II, Quadrant III, and Quadrant IV.

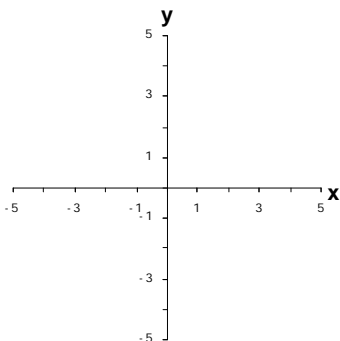


To sketch a **scatter plot** of paired data given in a table, . . .

What you should learn

How to plot points in the Cartesian plane

Example 1: Explain how to plot the ordered pair $(3, -2)$, and then plot it on the Cartesian plane provided.



II. The Distance Formula (Pages 62–63)

The **Distance Formula** states that . . .

What you should learn
How to use the Distance Formula to find the distance between two points

Example 2: Explain how to use the Distance Formula to find the distance between the points $(4, 2)$ and $(5, -1)$. Then find the distance and round to the nearest hundredth.

III. The Midpoint Formula (Page 64)

The **midpoint** of a line segment is the point that subdivides the segment into two portions of _____ length.

The **Midpoint Formula** gives the midpoint of the segment joining the points (x_1, y_1) and (x_2, y_2) as . . .

What you should learn
How to use the Midpoint Formula to find the midpoint of a line segment

Example 3: Explain how to find the midpoint of the line segment with endpoints at $(-8, 2)$ and $(6, -10)$. Then find the coordinates of the midpoint.

IV. Applications of the Coordinate Plane (Pages 63 and 65)

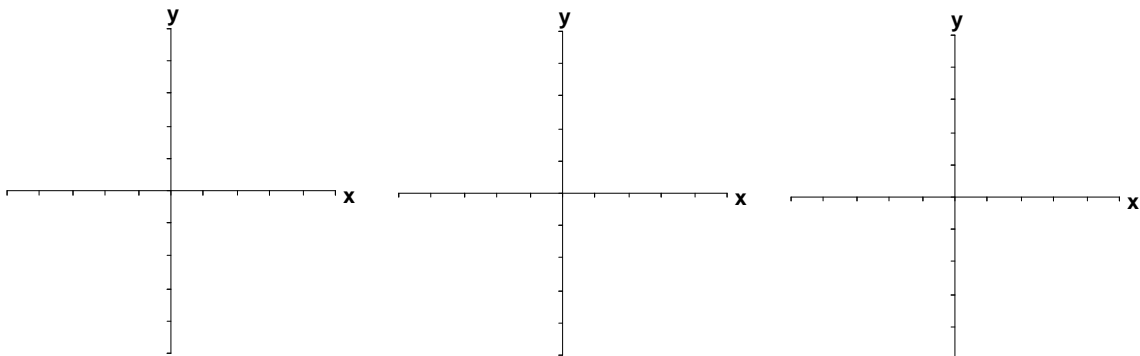
To shift a figure plotted in the rectangular coordinate system by a units to the left and b units upward, . . .

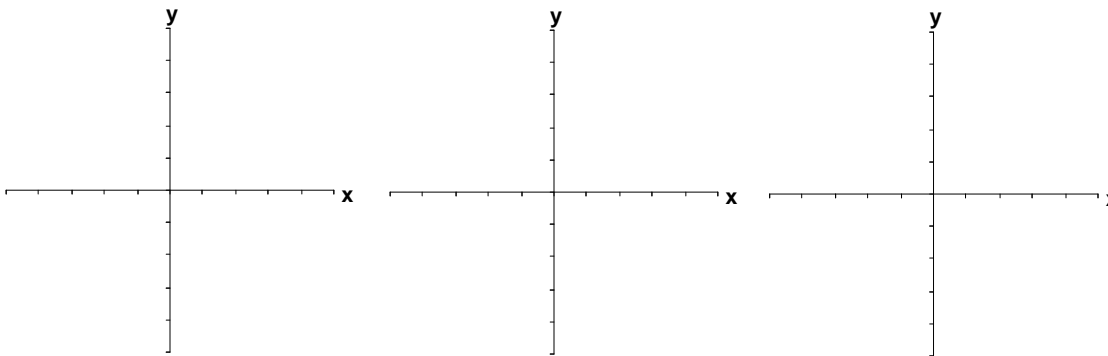
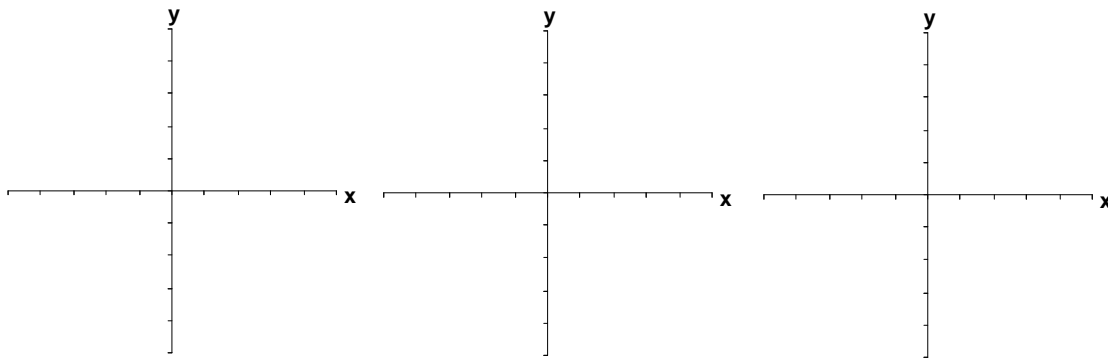
What you should learn
How to use a coordinate plane to model and solve real-life problems

Give two examples of real-life situations in which representing data graphically would be useful.

Describe a real-life situation in which the Distance Formula could be used to solve a problem.

Additional notes



Additional notes**Homework Assignment**

Page(s)

Exercises