

Chapter 1

Functions and Graphs

Exercise Solution

Exercise 1.1.61

Instruction

For the line that passes through the pair of points $(3, 5)$ and $(-1, 2)$.

- (a) Find the slope of the line.
- (b) Indicate whether the line is increasing, decreasing, horizontal, or vertical.

Solution

- (a) The slope of the line through two points (x_1, y_1) , (x_2, y_2) is given by,

$$m = \frac{y_2 - y_1}{x_2 - x_1}.$$

We substitute the given points to get the slope,

$$m = \frac{2 - 5}{-1 - 3} = \frac{-3}{-4} = \frac{3}{4}.$$

- (b) The slope is positive, hence the line is increasing.

Answer

- (a) $3/4$.
- (b) Increasing.