

Lesson 11.6: Analyzing Linear Functions

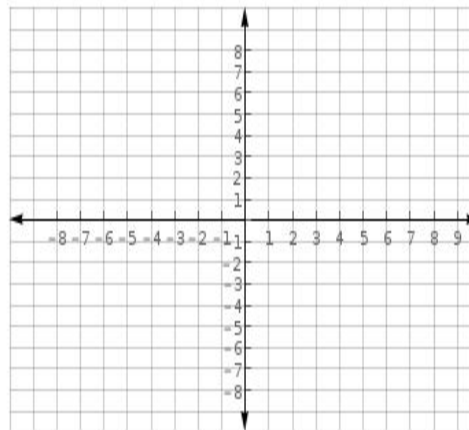
Targets

1. I can compare and interpret linear functions.

Ordered Pair Solutions to Equations

First attempt this problem on your own. Then watch the video and copy his notes.

- Is $(3, -4)$ a solution to the equation $5x + 2y = 7$?



Khan Activity: Ordered Pair Solutions to Linear Equations

Complete this activity on Khan.

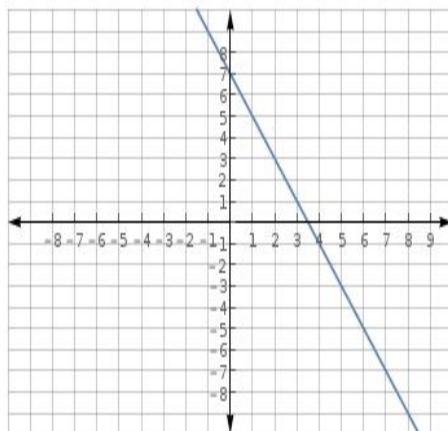
Comparing Linear Functions 1

First attempt this problem on your own. Then watch the video and copy his notes.

- *Two functions, f and g , are described below. Which of these statements about f and g is true?*

$$f = -\frac{7}{3}x + 1$$

g



- f and g are both increasing, and f is increasing faster than g .
- f and g are both increasing, and g is increasing faster than f .
- f and g are both decreasing, and g is decreasing faster than f .
- f and g are both decreasing, and f is decreasing faster than g .
- g is increasing, but f is decreasing.

Khan Activity: Comparing Linear Functions

Complete this activity on Khan.

Interpreting Linear Formulas Example 1

First attempt this problem on your own. Then watch the video and copy his notes.

- Andrei has a glass tank. First, he wants to put some marbles in it, all of the same volume. Then, he wants to fill the tank with water until it's completely full.
- This formula for the volume of water Andrei should use W (measured in liters) as a function of the number of marbles used n : $W(n) = 32 - 0.05n$

Complete the following sentences with the appropriate missing values:

- The glass tank's volume is _____ liters.
- The volume of each marble is _____ liters.

Khan Activity: Interpreting Linear Functions

Complete this activity on Khan.

Comparing Linear Functions Word Problems 1

First attempt this problem on your own. Then watch the video and copy his notes.

- Nick and Alyssa are racing up a wall. Alyssa's height on the wall is given by this equation: $a = \frac{1}{3}t + 5$
- where a is Alyssa's height in feet after climbing for t seconds.
- Nick started racing at the same time as Alyssa and is also climbing at a constant speed. His height is shown in the following table:

t	Nick's Height
6	6
8	7
10	8

Who started out higher, Alyssa or Nick?

Khan Activity: Comparing Linear Functions Word Problems

Complete this activity on Khan.

Linear Models Example 1

First attempt this problem on your own. Then watch the video and copy his notes.

Naoya read a book cover to cover in a single session, at a rate of 55 pages per hour. After reading for 4 hours, he had 330 pages left to read.

How long is the book?

pages

How long did it take Naoya to read the entire book?

hours

Khan Activity: Linear Models Word Problems

Complete this activity on Khan.

Exit Ticket

1. Have all your notes filled out above.
2. Complete the following Khan Academy Activities:
 - a. Ordered Pair Solution to Linear Equations
 - b. Comparing Linear Functions
 - c. Interpreting Linear Functions
 - d. Comparing Linear Functions Word Problems
 - e. Linear Models Word Problems