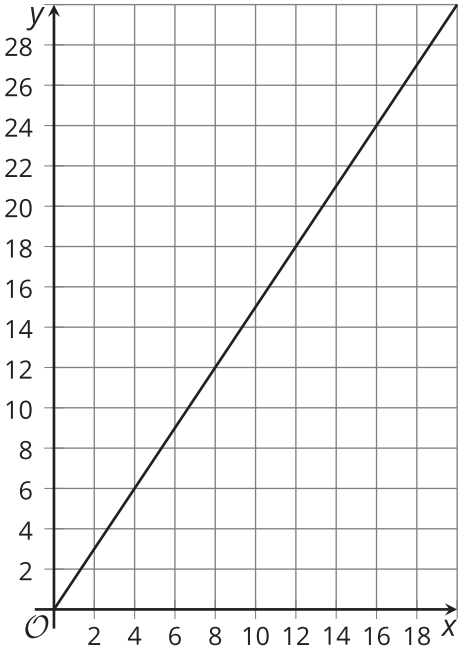
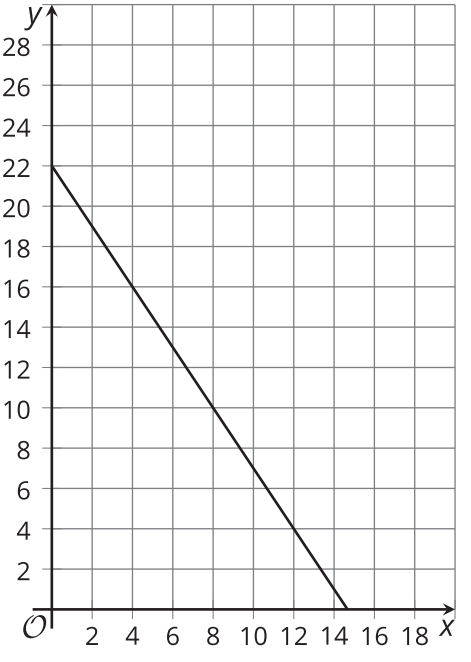
Lesson 5: Distance To and Distance From

- Let's represent the same situation in different ways.

5.1: Saving Up

Kiran is saving up to buy a game for $22. He starts with no money saved and adds $1.50 to his savings each week. Both of these graphs represent the situation.





Describe what x and y represent on each graph.

5.2: A Walk to the Park, or a Walk Away from Home?

1. A person is walking from home to a park that is 2,473 feet away. They are walking 280 feet per minute.
   a. How far away from home are they after 0, 1, 2, 3, 5, t minutes?

minutes	0	1	2	3	5	t
distance from home						

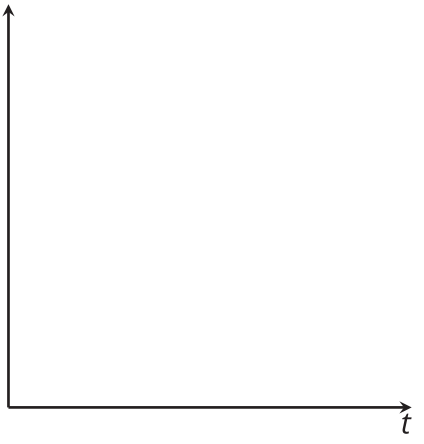
   b. How far away from the park are they after 0, 1, 2, 3, 5, t minutes?

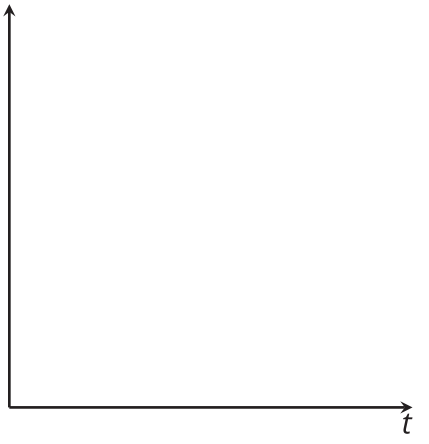
minutes	0	1	2	3	5	t
distance from park						

2. Create an equation that relates t to:
   a. the distance from home

   b. the distance from the park

3. Create a rough sketch of a graph of each equation. Label the coordinates of any horizontal or vertical intercepts.





4. Which is the closest to the number of minutes it takes the person to reach the park: 6, 8, 9, or 12? Explain how you know.

5.3: Walking to School

1. A person walks from home to school. The function $d(t) = 250t$ gives the distance from home as a function of time, t, in minutes. The school is 4,000 feet from home.

   a. How far does the person walk in 30 seconds?

   b. Here are two tables representing the person's walk. How are the tables alike? How are they different?

   c. Complete the tables.

time (minutes)	0	1	2	3	4	t
distance from home (feet)	0	250	500			

time (minutes)	0	1	2	3	4	t
distance from school (feet)	4,000	3,750	3,500			

2. The *square* of a number refers to the product of the number and itself. For example, the square of 3 is 9, because $3^2 = 9$. Complete the table showing squares and positive square roots of different numbers.

n	4	8	0.8		$\frac{1}{10}$	12				
n^2	16			81			1.96	256	$\frac{1}{289}$	400