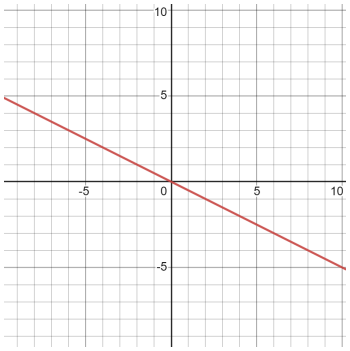
Lesson 2-7: Analyze Linear Equations: y = mx

1. Sample answer: In a proportional relationship, the slope is the same as the constant of proportionality. The equation of a line y = mx is the same as the equation for a proportional relationship y = kx.

2. Sample answer: They all pass through the origin. They may have slopes of different steepness and direction.

3. Sample answer: I can find the ratio of meters to seconds between two pairs of values. This ratio is the constant of proportionality *k*, which is equal to the slope *m*. in this case, m = 12.5 so the equation is y = 12.5x.

4. a. 30; 30
   b. y = 30x

5. 

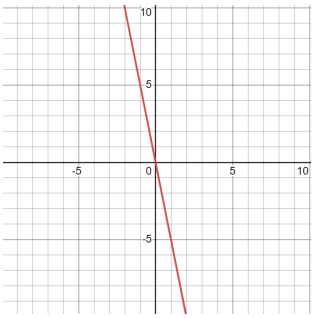
6. a. $\frac{280-140}{4-2}$; $\frac{140}{2}$
   70

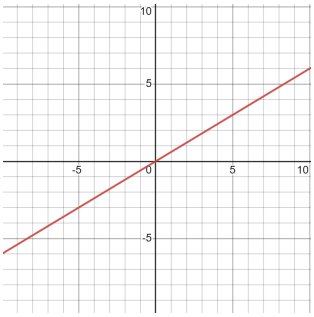
   b. 70

7. y = $\frac{1}{4}$x

8. No; Sample answer: Franco did not consider the negative symbol in the x-coefficient. The graph should start at (0,0) and pass through (1,-1).

9. a. y = 12x
   b. Sample answer: An equation would be in the form y = mx. A graph would be a line passing through (0,0).

10. 

11. 

12. a. y = 0.30x
    b. Sample answer: The prices are positive, so the graph should be in the first quadrant.

13. The graph has the greater unit rate: 47.

14. a. y = 62x
    b. C