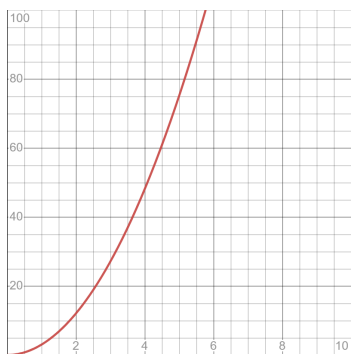


### Lesson 3-2: Connect Representations of Functions

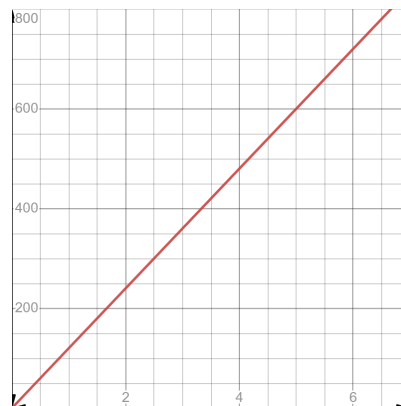
1. Sample answer: A table, an equation, and a graph can represent a function.
2. Sample answer: There will be more than one y-value for at least one of the x-values.
3. No; Sample answer: As long as only one output value (i.e., y-value) is assigned to each input value (i.e., x-value), the relation is a function. The shape of the graph does not affect that.
4. Yes; Sample answer: The relationship is a linear function because the graph is a straight line.
5. Sample answer: She can find the x-value when the y-value is 50. At 5 weeks, she has just 50 hats left.
6. Sample answer: There is exactly one y-value for each x-value, so the graph represents a function.
7. Sample answer: There is exactly one y-value for each x-value, so the graph represents a function.

8. a.



b. Yes; Sample answer: Each x-value has exactly one y-value.

9. Yes; Sample answer: Each number of hexagons results in exactly one perimeter.
10. No; Sample answer: There are two y-values when  $x = 4$ .
11. a.  $d = 120t$   
b. linear



12. Sample answer: Graph A is not a function because some x-values have more than one corresponding y-value. Graph B is a function because there is exactly one y-value for each x-value. Graph A is not a good representation of a real-world situation because an object cannot be at two different distances at the same time.
13. a. 44; 88; 176  
b. Yes; Sample answer: The relation is a function. Each input value has one unique output value. It is a nonlinear function because the rate of change is not constant.
14. 4; 2; -2; -4