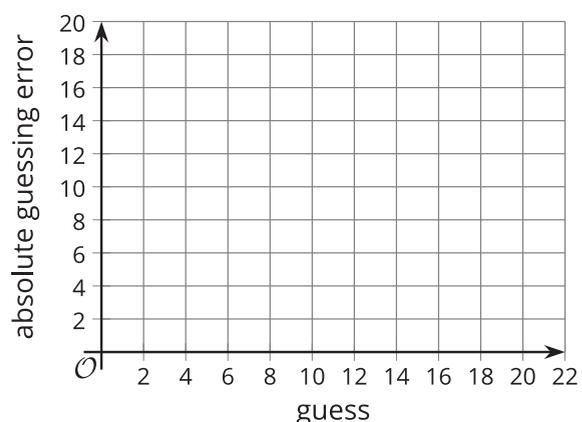


Lesson 13 Practice Problems

1. A group of ten friends played a number guessing game. They were asked to pick a number between 1 and 20. The person closest to the target number wins. The ten people made these guesses:

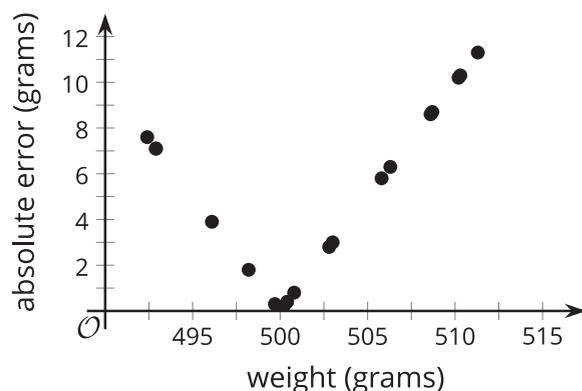
guess	2	15	10	8	12	19	20	5	7	9
absolute guessing error										

- The actual number was 14. Complete the table with the absolute guessing errors.
- Graph the guess and absolute guessing errors.
- Is the absolute guessing error a function of the guess? Explain how you know.

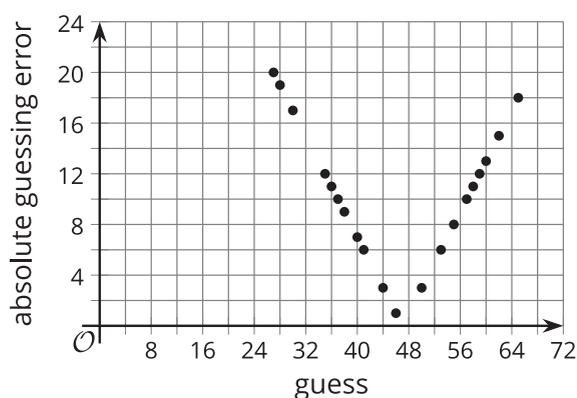


2. Bags of walnuts from a food producer are advertised to weigh 500 grams each. In a certain batch of 20 bags, most bags have an absolute error that is less than 4 grams.

Could this scatter plot represent those 20 bags and their absolute errors? Explain your reasoning.



3. The class guessed how many objects were placed in a mason jar. The graph displays the class results, with an actual number of 47.



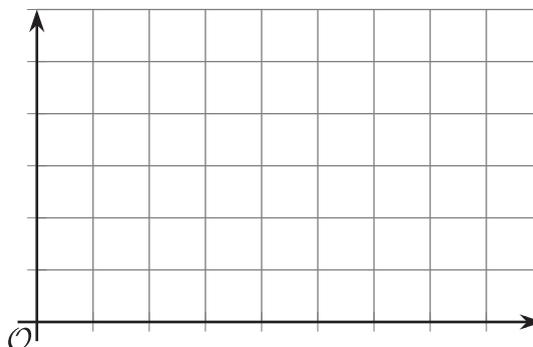
Suppose a mistake was made, and the actual number is 45.

Explain how the graph would change, given the new actual number.

4. Function D gives the height of a drone t seconds after it lifts off.

Sketch a possible graph for this function given that:

- $D(3) = 4$
- $D(10) = 0$
- $D(5) > D(3)$



(From Unit 4, Lesson 3.)

5. The population of a city grew from 23,000 in 2010 to 25,000 in 2015.

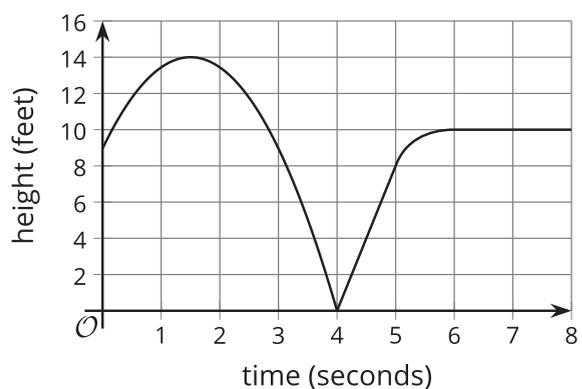
a. What was the average rate of change during this time interval?

b. What does the average rate of change tell us about the population growth?

(From Unit 4, Lesson 7.)

6. Here is the graph of a function.

Which time interval shows the largest rate of change?

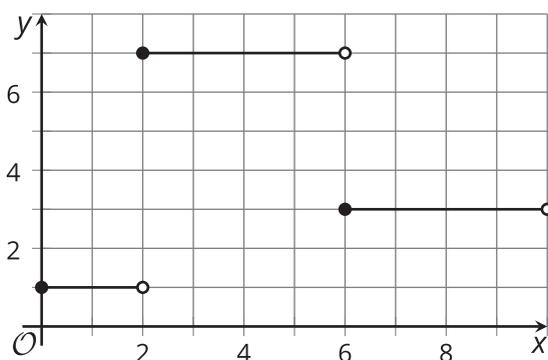


- A. From 0 to 2 seconds
- B. From 0 to 3 seconds
- C. From 4 to 5 seconds
- D. From 6 to 8 seconds

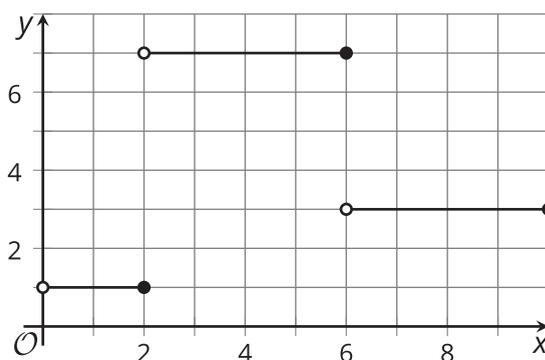
(From Unit 4, Lesson 7.)

7. Here are the graphs of $L(x)$ and $R(x)$.

$L(x)$



$R(x)$



- a. What are the values of $L(0)$ and $R(0)$?
- b. What are the values of $L(2)$ and the $R(2)$?
- c. For what x -values is $L(x) = 7$?
- d. For what x -values is $R(x) = 7$?

(From Unit 4, Lesson 12.)

8. Select **all** systems that are equivalent to this system of equations: $\begin{cases} 4x + 5y = 1 \\ x - y = \frac{3}{8} \end{cases}$

A. $\begin{cases} 4x + 5y = 1 \\ 4x - 4y = \frac{3}{2} \end{cases}$

B. $\begin{cases} x + \frac{5}{4}y = \frac{1}{4} \\ x - y = \frac{3}{8} \end{cases}$

C. $\begin{cases} 4x + 5y = 1 \\ 5x - 5y = 3 \end{cases}$

D. $\begin{cases} 8x + 10y = 2 \\ 8x - 8y = 3 \end{cases}$

E. $\begin{cases} x + y = \frac{1}{5} \\ x - y = \frac{3}{8} \end{cases}$

(From Unit 2, Lesson 16.)