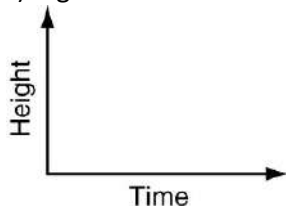


Algebra 1 Homework – 3.1 and 3.3

Name: _____ Date: _____ Block: _____

Sketch a graph for the given situation. Tell whether the graph is discrete or continuous.

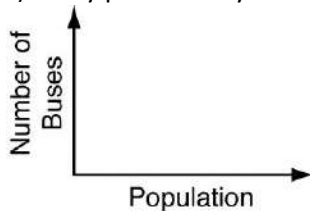
- 1) A giraffe is born 6 feet tall and continues to grow at a steady rate until it is fully grown.



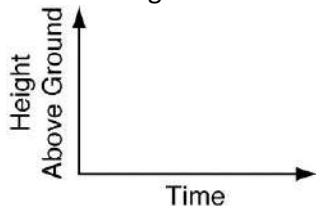
- 2) The price of a used car is discounted \$200 each week.



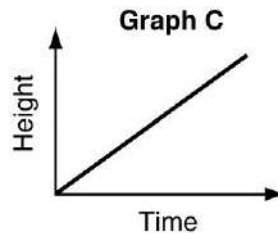
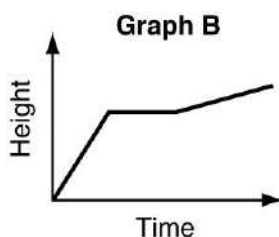
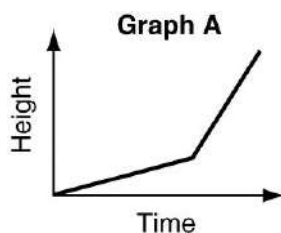
- 3) A city planner buys more buses as the population of her city grows.



- 4) Joseph is sky-diving. At first, he is free-falling rapidly and then he releases his parachute to slow his descent until he reaches the ground.



- 5) Choose the graph that best represents each situation.



1. A tomato plant grows taller at a steady pace.
2. A tomato plant grows quickly at first, remains a constant height during a dry spell, then grows at a steady pace.
3. A tomato plant grows at a slow pace, then grows rapidly with more sun and water.

Identify the independent and dependent variables. Write a rule in function notation for each situation.

6) Each state receives electoral votes based on the number of representatives it has in the House of Representatives.

| | | | | |
|------------------------|---|---|---|----|
| Representatives | 2 | 4 | 6 | 8 |
| Electoral Votes | 4 | 6 | 8 | 10 |

7) Ronaldo is buying bacon that costs \$4.29 per pound.

8) Carson charges \$7 per hour for yard work.

9) Kay donates twice what Ed donates.

Evaluate each function for the given input values.

10) For $f(x) = 5x + 1$, find $f(x)$ when $x = 2$ and when $x = 3$.

11) For $g(x) = -4x$, find $g(x)$ when $x = -6$ and when $x = 2$.

12) For $h(x) = x - 3$, find $h(x)$ when $x = 3$ and when $x = 1$.

13) An aerobics class is being offered once a week for 6 weeks. The registration fee is \$15 and the cost for each class attended is \$10. Write a function rule to describe the total cost of the class. Find a reasonable domain and range for the function. **Hint: The graph would be DISCRETE.**