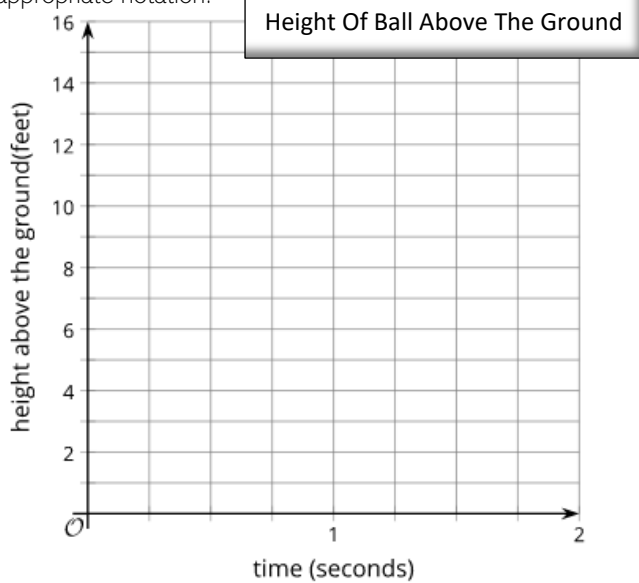
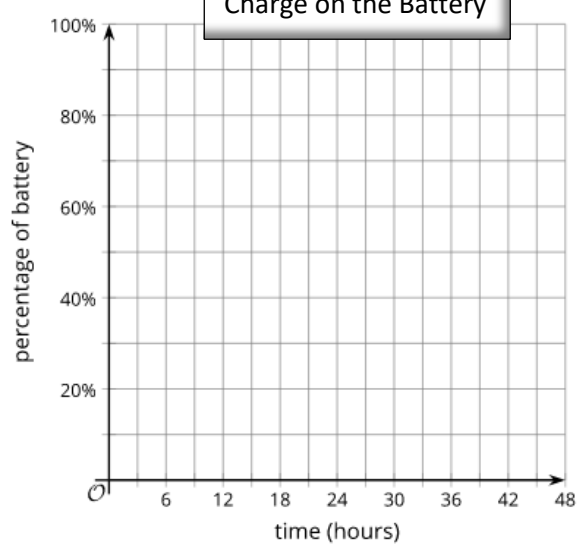


1. Pedro kicks a ball that's on the ground so that it goes up to a height of about 10 feet and then comes back down to hit the ground 1.55 seconds later.
- Sketch your best graph of the situation (graph paper is NOT necessary, but make sure to write in the scales and labels as shown on your own paper.
  - What does the independent variable represent? What meaningful letter will you use to represent it?
  - What does the dependent variable represent? What meaningful letter will you use to represent it?
  - State the domain and range for the problem using appropriate notation.

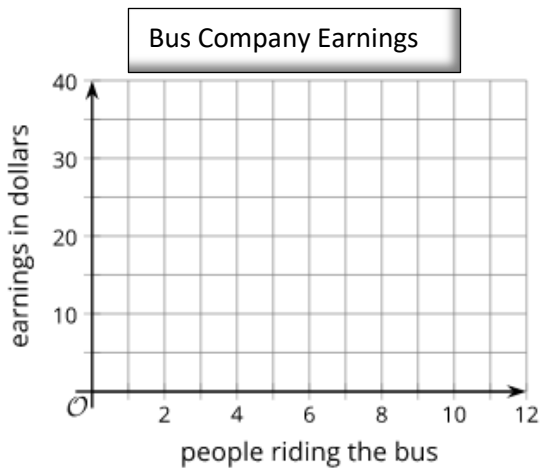


2. Nayeli's phone was fully charged. Nayeli uses her phone until it is completely dead, then charges it all the way back up at a steady rate which is faster than the rate at which her battery lost power.
- Sketch your best graph of the situation (graph paper is NOT necessary, but make sure to write in the scales and labels as shown on your own paper.
  - What does the independent variable represent? What meaningful letter will you use to represent it?
  - What does the dependent variable represent? What meaningful letter will you use to represent it?
  - State the domain and range for the problem using appropriate notation.



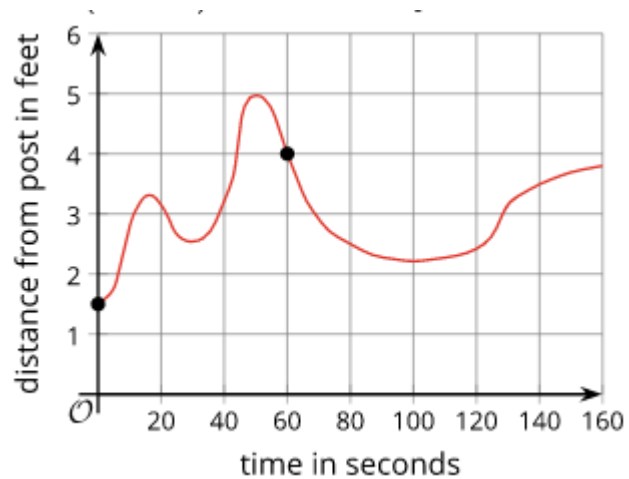
3. A small bus charges \$3.50 per person for a ride from the train station to a concert. The bus will run if at least 3 people take it, and it cannot fit more than 10 people.

Function  $B$  gives the amount of money that the bus company earns when  $n$  people ride the bus. List all numbers that make sense as the inputs and outputs for this function. Sketch a graph of .



4. Function  $f$  gives the distance of a dog from a post, in feet, as a function of time, in seconds, since its owner left.

- Find the value of  $f(20)$ .
- Evaluate the function for  $t = 140$ .
- If  $f(t) = 3$ , what are the possible values of  $t$ ?
- Write the domain and range for  $f(t)$  using appropriate notation.



5. Function  $C(n)$  gives the cost, in dollars, of buying  $n$  apples. What does each expression or equation represent in this situation?

a)  $C(5) = 4.50$       b)  $C(5)$

6. The function  $S$  gives the number of people, in millions, who own a smartphone,  $t$  years after year 2000.

What does each equation tell us about smartphone ownership?

a)  $S(17) = 2,320$       b)  $S(-10) = 0$

Use function notation to represent each statement.

c) In 2010, the number of people who owned a smartphone was 296,600,000.

d) In 2015, about 1.86 billion people owned a smartphone.

7.  $g(x) = 3x - 3$       a) Find  $g(-6)$       b) Find  $g(0)$       c) Find  $g(x + 5)$

8.  $g(x) = 3x - 3$       If  $g(x) = 9$ , what is  $x$ ?

REVIEW: Solve the equations Solve and graph the inequality

9.  $|-2r - 1| = 11$

10.  $2 - 5|-5m - 5| = -73$

11.  $|-2r - 1| < 11$