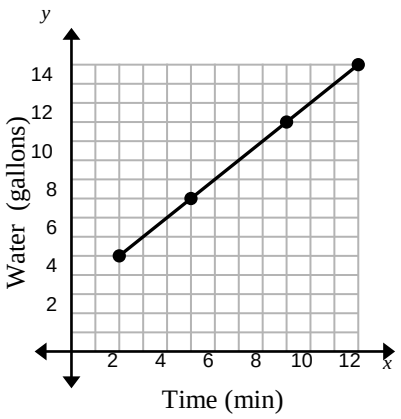
Name _____ Period_____ Date_____

# Constructing Functions from Graphs (page 1)

*For each problem, determine the rate of change and initial value. Where applicable, interpret the rate of change and initial value in term of the situation. Write a function to represent the situation.*

1. The amount of water in a pool being filled is represented by the graph. The filling of the pool is at a constant rate.




   Rate of change:

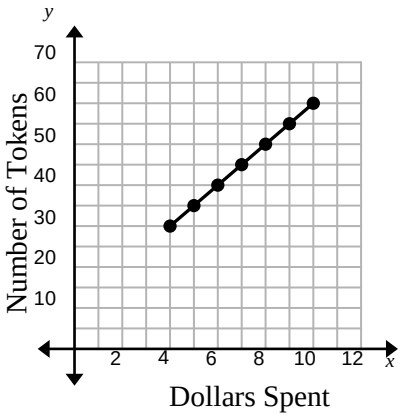
   Interpretation:

   Initial value:

   Interpretation:

   Function:

2. An arcade sells tokens, issuing them for each dollar spent. However, as part of an anniversary celebration, the arcade gave out free tokens on that day. The graph show the number of tokens customers received for each dollar spent on that day.




   Rate of change:

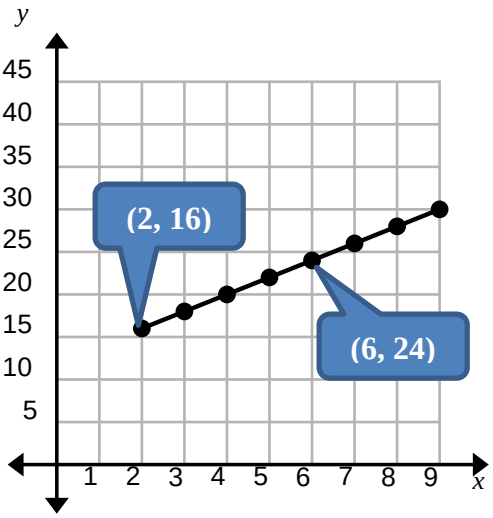
   Interpretation:

   Initial value:

   Interpretation:

   Function:

3. The graph represents a linear function.



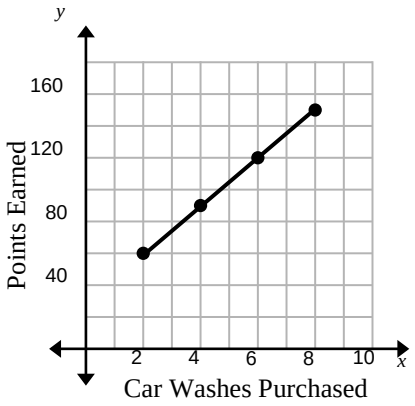

   Rate of change:

   Initial value:

   Function:

## Constructing Functions from Graphs (page 2)

4. A car wash offers free points towards a free detail when you sign up for their rewards card. For each car wash purchased, you can also earn an additional number of points. The graph show the total points earned for several car washes.




Rate of change:

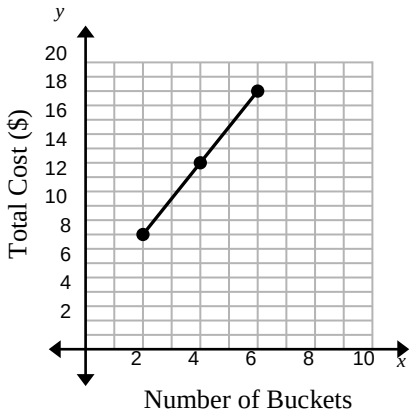
Interpretation:

Initial value:

Interpretation:

Function:

5. A golf driving range charges a fee for every bucket of golf balls you drive. There is a flat fee for renting golf clubs.




Rate of change:

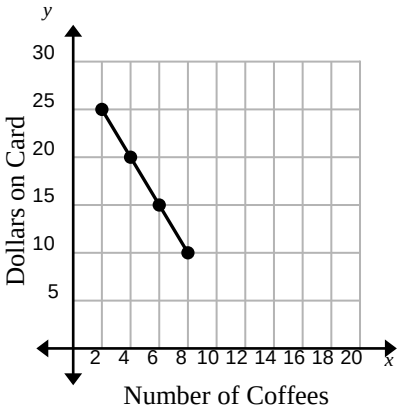
Interpretation:

Initial value:

Interpretation:

Function:

6. A cash register deducts a specific amount for every medium coffee the customer buys. The graph represents the number of dollars left on the card after each medium coffee has been purchased. Assume that only medium coffees are purchased with this card.




Rate of change:

Interpretation:

Initial value:

Interpretation:

Function:

How many coffees will have been purchased when the card has a balance of $0?