

Name: _____

Date: _____

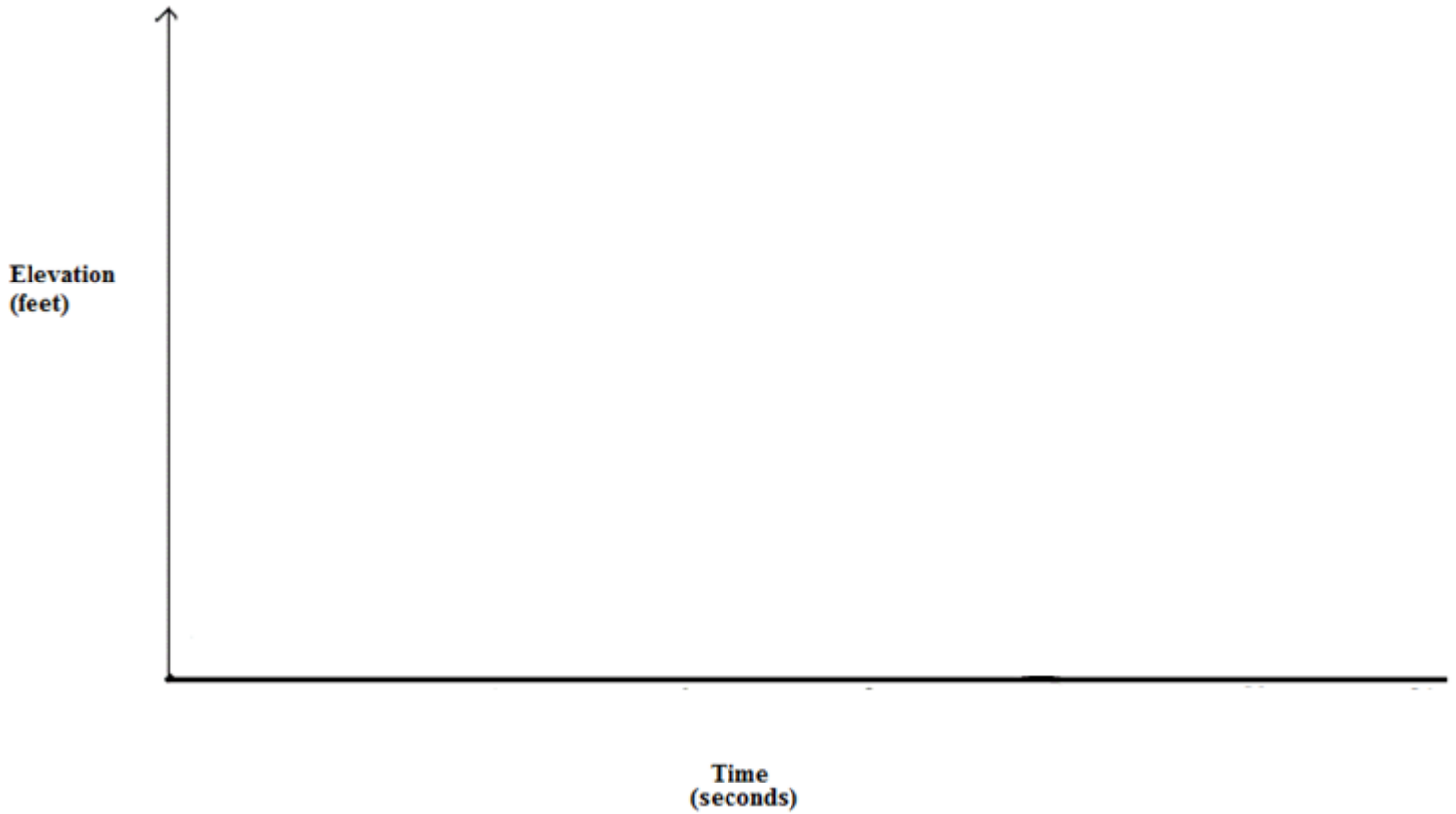
UNIT 6

LESSON 1

AIM: WHAT IS A PIECEWISE LINEAR FUNCTION?

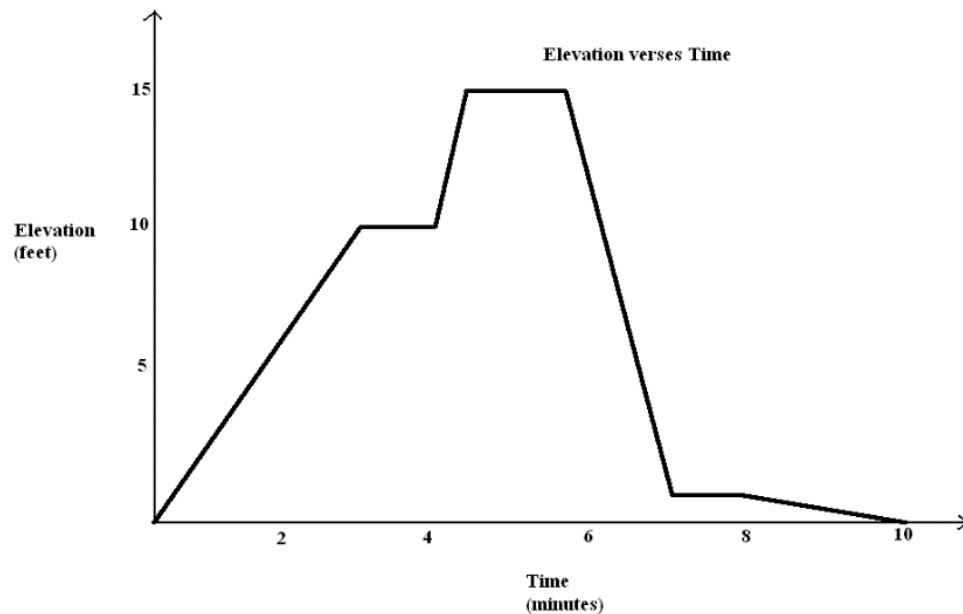
Do Now: Watch the video <http://www.mrmeyer.com/graphingstories1/graphingstories2.mov>.

a) Sketch the story using the graph below.



PIECEWISE LINEAR FUNCTION: _____

1. Answer the following questions based on the piecewise function graph below.



a) Describe a story that represents the graph above.

b) What is happening in the story when the graph is increasing, decreasing, and constant over time?

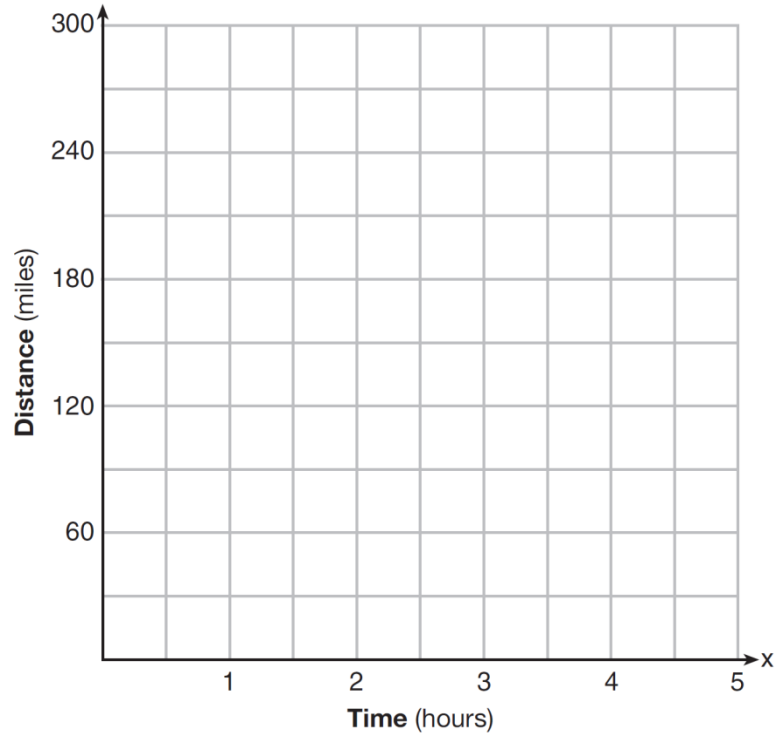
c) What does it mean for one part of the graph to be steeper than another?

d) What was the average rate of change of the person's elevation between time 0 minutes and 4 minutes?

Average rate of change:

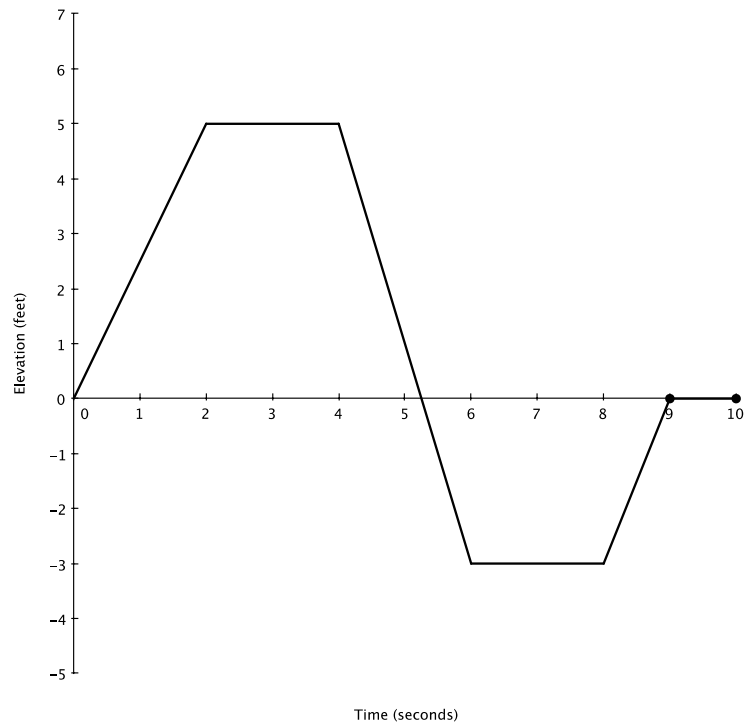
From the August 2015 Regents:

2. A driver leaves home for a business trip and drives at a constant speed of 60 miles per hour for 2 hours. Her car gets a flat tire, and she spends 30 minutes changing the tire. She resumes driving and drives at 30 miles per hour for the remaining one hour until she reaches her destination. On the set of axes below, draw a graph that models the driver's distance from home.



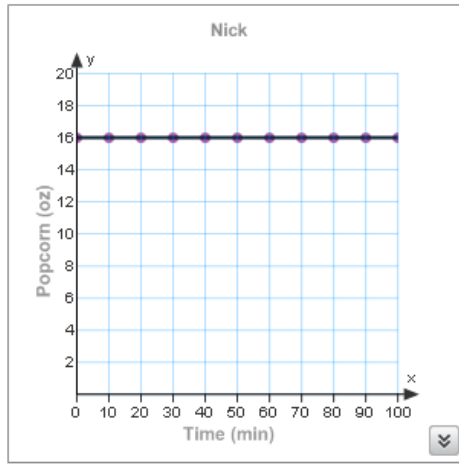
3. Answer the following questions based on the piecewise function graph below.

- a) Describe a story that represents the graph above.
- b) What was the average rate of change of the person's elevation between time 0 seconds and 2 seconds?
- c) What was the average rate of change of the person's elevation between time 2 seconds and 4 seconds?
- d) What was the average rate of change of the person's elevation between time 4 seconds and 6 seconds?

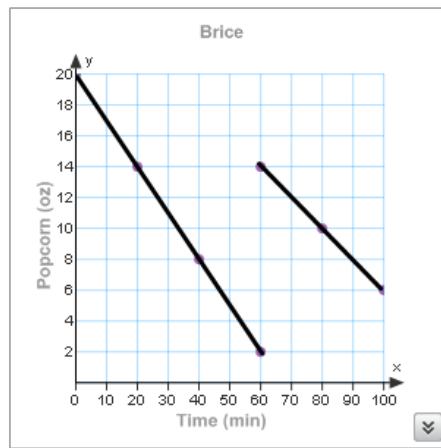


4. Below are two different graphs that represent popcorn at the movies. Describe what may have happened in each situation:

a.



b.



Name: _____

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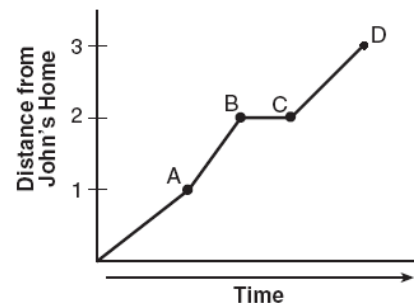
UNIT 6

HW# _____

LESSON 1

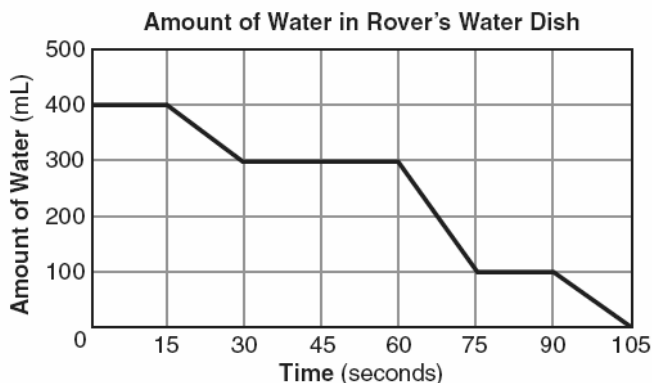
1. John left his home and walked 3 blocks to his school, as shown in the accompanying graph. What is one possible interpretation of the section of the graph from point *B* to point *C*?

- a) John arrived at school and stayed throughout the day.
- b) John waited before crossing a busy street.
- c) John returned home to get his mathematics homework.
- d) John reached the top of a hill and began walking on level ground.



2. The accompanying graph shows the amount of water left in Rover's water dish over a period of time.

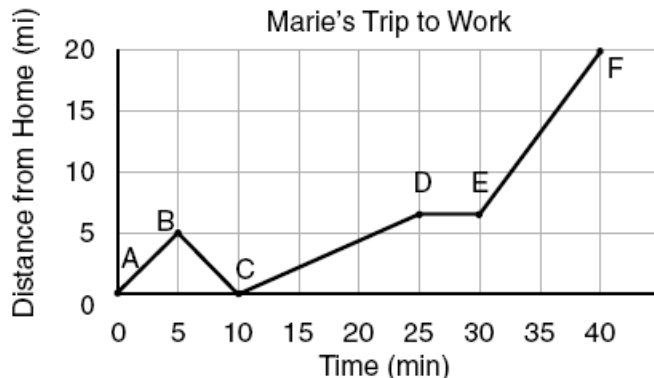
- a) How much water did Rover start with in his dish?
- b) How long did it take Rover to drink all his water?
- c) How many breaks did Rover take from drinking his water between 1-105 seconds?



- d) Did Rover drink faster between 15-30 seconds or between 60-75 seconds?
- e) How long did Rover wait from the end of his first drink to the start of his second drink of water?
- f) What was Rover's average rate of speed he drank his water between 60-75 seconds? Round to the nearest milliliter per second.

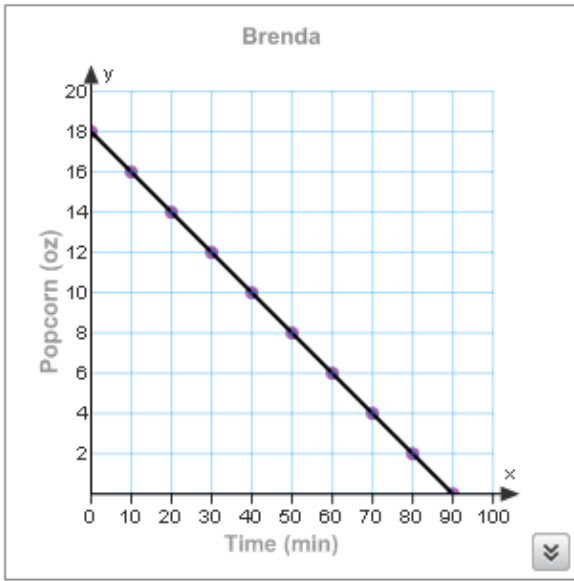
3. The accompanying graph shows Marie's distance from home (*A*) to work (*F*) at varies times during her drive. Marie left her briefcase at home and had to return to get it.

- a) State which point represents when Marie turned back around to go home.
- b) Marie also had to wait at the railroad tracks for a train to pass. How long did she wait?
- c) Find the average rate of speed between *B* and *C*?

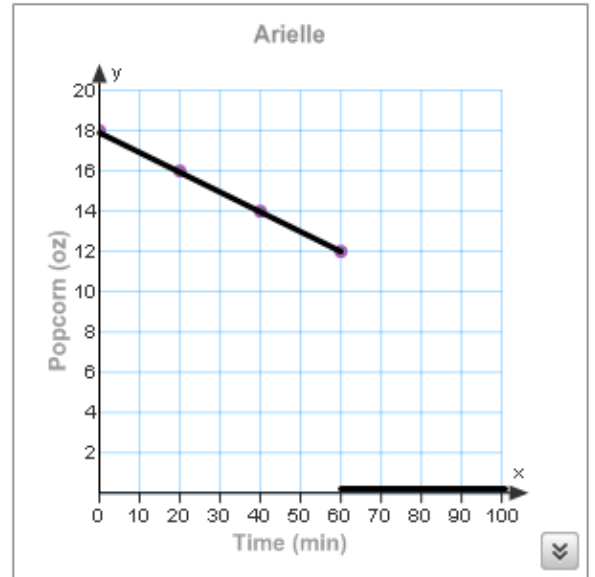


4. Below are two different graphs that represent popcorn at the movies. Describe what may have happened in each situation:

A.



B.



*******DON'T FORGET TEXTBOOK!!!*******