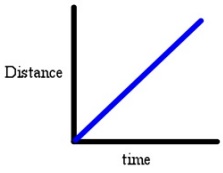
Stories from Graphs

Name: _____
Period: _____

The graphs represent different trips Maya made from home to Jordan High School.
Distance is measured from home to Jordan High School. (D = 0 is home, t = 0 is the starting time)

Use *complete* sentences for each explanation. Sentences ***start*** with a ***capital letter*** and ***end*** with ***a period***.

1) What did Maya do to create a graph that looks like this?

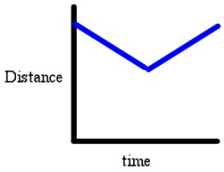


Explain:

_____

_____

2) What did she do to create a graph that looks like this?

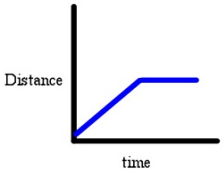


Explain:

_____

_____

3) What did she do to create a graph that looks like this?

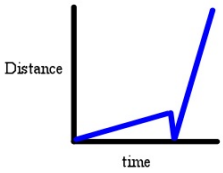


Explain:

_____

_____

4) What did she do to create a graph that looks like this?



Explain:

_____

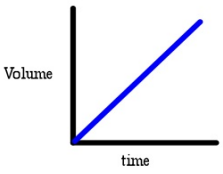
_____

Name: _____
Period: ____

Perry, the platypus, bought a fish tank. The following graphs represent the amount of water in the fish tank.

Use *complete* sentences for each explanation. Sentences ***start*** with a ***capital letter*** and ***end*** with ***a period***.

1) What did Perry do to create a graph that looks like this?

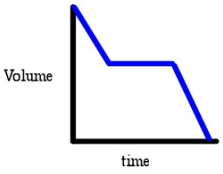


Explain:

_____

_____

2) What did he do to create a graph that looks like this?

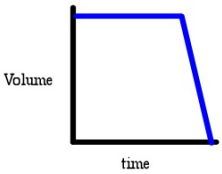


Explain:

_____

_____

3) What did he do to create a graph that looks like this?

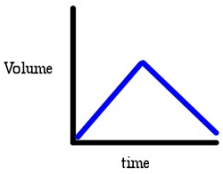


Explain:

_____

_____

4) What did he do to create a graph that looks like this?



Explain:

_____

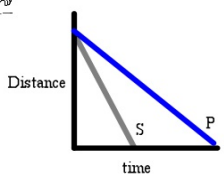
_____

These graphs represent trips taken by two friends, Sponge Bob and Patrick.
The distance is measured from Sponge Bob's home to the Krusty Crab restaurant.
S = Sponge Bob and P = Patrick. D = 0 is at home, and t = 0 is their starting time.

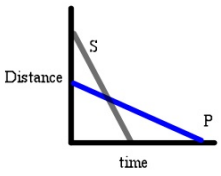
Krusty Krab

SB house

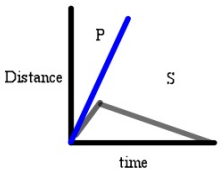
Graph 1



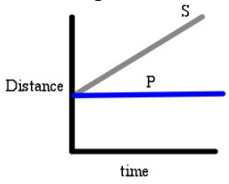
Graph 2



Graph 3



Graph 4



Use *complete* sentences for each explanation.

A) For graph 1: Who traveled faster - Sponge Bob or Patrick?

Explain: _____

B) For graph 2: Who started farther away? What does the intersection mean?

Explain: _____

C) For graph 3: Describe the trips of Sponge Bob and Patrick.

Explain: _____

_____

D) For graph 4: Describe the similarities and differences in the trips of Sponge Bob and Patrick.

Similarities: _____

Differences: _____

Solve for y using addition and subtraction. **Show *all* of the steps necessary to complete *each* problem.**

1. $4x + y = 2$
2. $y - 2x = 6$
3. $y - 3x = 2$

4. $y + 5x = 10$
5. $y + x = 7$
6. $y - 3x = 9$

Solve for y using division. *(Be sure to watch the negative signs and subtractions signs)*

7. $4y = 8x - 4$
8. $-7y = -49x + 56$
9. $8y = 48x + 32$

Simplify each expression.

10. $\frac{6x+12}{3}$
11. $\frac{x-10}{5}$
12. $\frac{4x-24}{8}$
13. $\frac{x+20}{4}$
14. $\frac{28x-14}{7}$

Answers

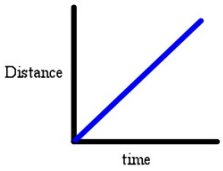
Stories from Graphs

Name: _____
Period: _____

The graphs represent different trips Maya made from home to Jordan High School.
Distance is measured from home to Jordan High School. (D = 0 is home, t = 0 is the starting time)

Use *complete* sentences for each explanation. Sentences ***start*** with a ***capital letter*** and ***end*** with ***a period***.

1) What did Maya do to create a graph that looks like this?



Explain:

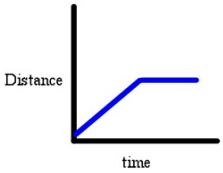
Maya walked at a constant rate from her home to JHS.

2) What did she do to create a graph that looks like this?

Explain:

Maya started walking home from JHS. She was half way home when she remember she had volleyball practice. She returned to JHS.

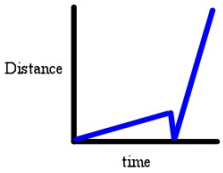
3) What did she do to create a graph that looks like this?



Explain:

Maya walked from home towards JHS, but stopped at 7-11 and talked to a friend.

4) What did she do to create a graph that looks like this?



Explain:

Maya was walking slowly to JHS when she realized she forgot her homework at home. She ran home, then ran all the way to school.

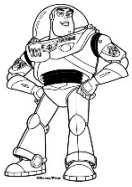
Day 2

More stories from Graphs

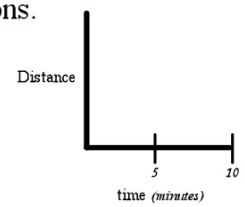
Name: _____
Period: _____

The following graphs represent different trips Buzz Lightyear made going from Andy's room to the front door. All distances are measured from the room. D = 0 is Andy's room and t = 0 is his starting time.

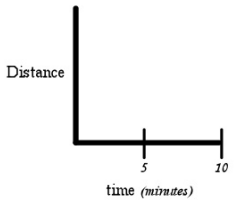
Sketch the distance/time graph that corresponds to each of the following descriptions.



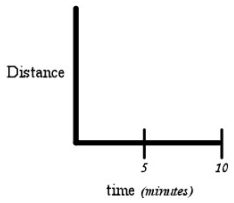
1) Buzz moved at a steady pace from the room to the front door.



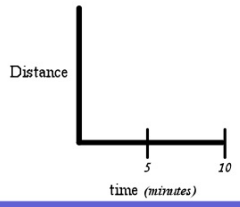
2) Buzz stands still at the front door looking outside.



3) Buzz moves at a constant speed from the front door to Andy's room. ***Half*** way there Andy walks in and Buzz stands still for the rest of the time.



4) Buzz moves at a constant speed away from Andy's room for 5 minutes, then reverses direction and moves more quickly toward the room.



Name: _____
Period: ____

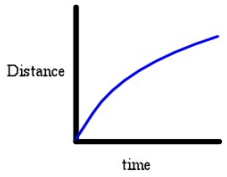
Typically people *(and cartoon characters)* don't walk at exactly the same speed all of the time.
The following graphs tell the stories of three different students leaving school.

Write a story for the graphs which explains how the three students moved.
Be sure your story includes explanations of why the first two graphs are curved.

Use complete sentences when writing your stories - make-up names for each student.

Graph A

Graph B



Explain the difference between Graph A and Graph C

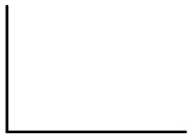
Graph C

Draw graphs for the following situations

***Label** the axes with the correct titles*

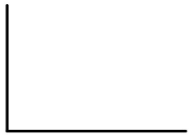
1) Harry Potter walks from Hogwarts' castle to Hagrid's house. Halfway to Hagrid's, he realizes he forgot his wand and returns to the castle.

Graph ***time*** on the horizontal axis and ***distance*** on the vertical axis.



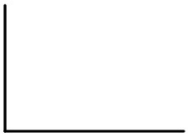
2) Phineas is jumping on a trampoline.

Graph ***time*** on the horizontal axis and ***distance off the ground*** on the vertical axis.



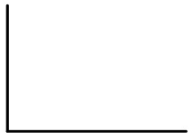
3) Lightning McQueen is speeding along the highway and is stopped by a police officer. The officer gives him a ticket and he continues on his way.

Graph ***time*** on the horizontal axis and his ***speed*** on the vertical axis.

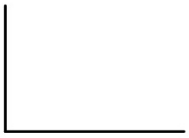


4) Timmy Turner lives in a large city and travels to school on a local bus that stops at every block to let passengers on and off.

a) Graph ***time*** on the horizontal axis and his ***speed*** on the vertical axis.



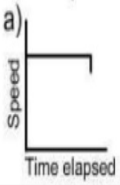
b) Graph ***time*** on the horizontal axis and the ***distance*** Timmy traveled on the vertical axis.

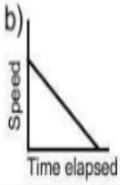


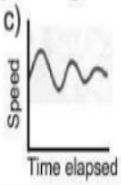
IDENTIFYING QUALITATIVE GRAPHS

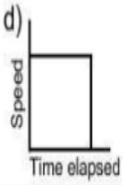
Identify which graph matches the statement.

1. A train pulls into a station and lets off its passengers.

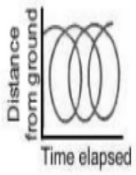
a) 

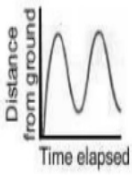
b) 

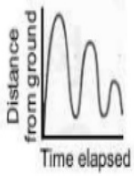
c) 

d) 

2. A man takes a ride on a ferris wheel.

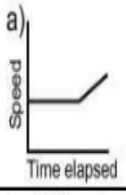
a) 

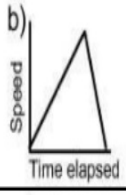
b) 

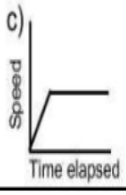
c) 

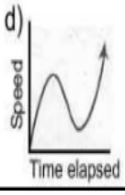
d) 

3. A woman climbs a hill at a steady pace, and then starts to run down one side.

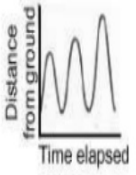
a) 

b) 

c) 

d) 

4. A child swings on a swing.

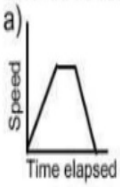
a) 

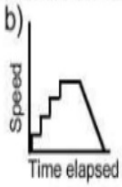
b) 

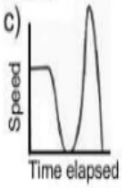
c) 

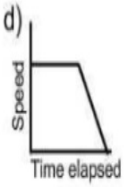
d) 

5. A child climbs up a slide and then slides down.

a) 

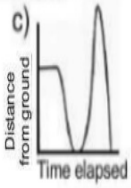
b) 

c) 

d) 

a) 

b) 

c) 

d)