objective:
You will interpret situations in terms of given graphs and create situations that fit given graphs

situation graphs

agenda

Warm-Up

Notes

Homework

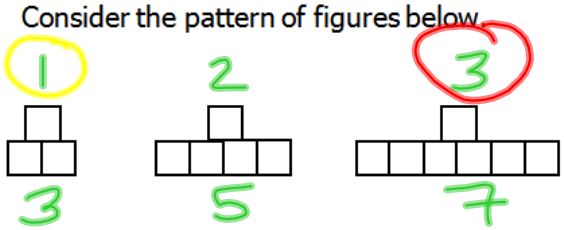
quiz tmr!

hw 2.1

due tmr

warm-up

1. Consider the pattern of figures below.



What is the expression that can be used to determine the number of squares in the nth figure?

A. n^2 $1^2=1$
B. n+2 $1+2=3$ $3+2=$
C. 2n+1 $2\cdot1+1=3$ $2\cdot3+1=7$ ✓
D. 2n $2\cdot1$

2. Which expression can be used to find the nth term in the following sequence, where *n* represents a number's position in the sequence?

Position in Sequence	1	3	6	9	*n*
Term	3	-1	-7	-13	

+2 +3 +3

-4 -6 -6

-2n+5

-2(3)= -6

rate of change: $\frac{\text{change in term}}{\text{change in position}} = \frac{-4}{2} = -2$

Answers:

1. Linear; D: all real numbers, $\mathbb{R}$; R: all real numbers, $\mathbb{R}$
2. Quadratic; D: all real numbers, $\mathbb{R}$; R: $y \geq 2$
3. Not a Function; D: $x = 2$; R: all real numbers, $\mathbb{R}$
4. Not a Function; D: $x \geq 0$; R: all real numbers, $\mathbb{R}$
5. Quadratic; D: all real numbers, $\mathbb{R}$; R: $y \leq 1$
6. Linear; D: all real numbers, $\mathbb{R}$; R: all real numbers,
7. D
8. C
9. B
10. D

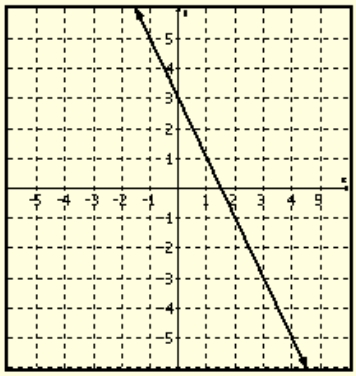
Algebra I - Unit 2: Topic 1

Practice - Domain and Range Using Parent Functions (2 pages) No Textbook Correlation

Name_____ Date _____ Period _____

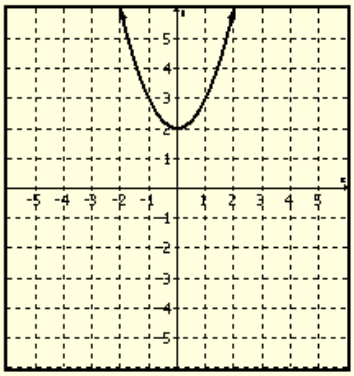
Determine if the graphs are linear (L), quadratic (Q), or neither (N). State the Domain and Range.

1.



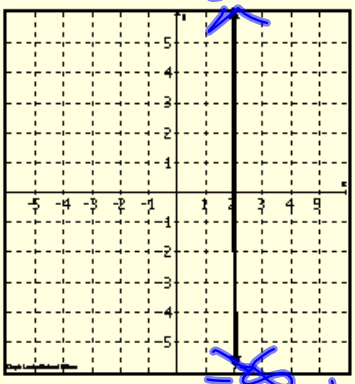
L/Q/N?	
Domain	
Range	

2.



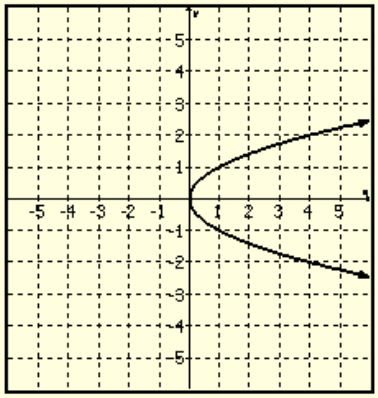
L/Q/N?	
Domain	
Range	

3.



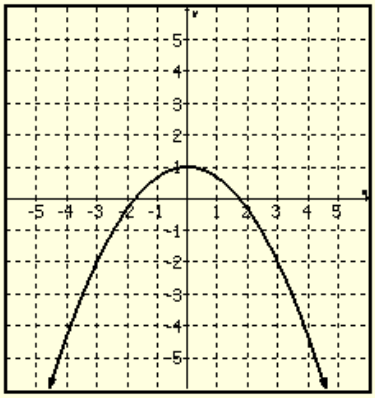
L/Q/N?	Neither/L
Domain	$\mathbb{R}$ or $x=2$
Range	$\mathbb{R}$

4.



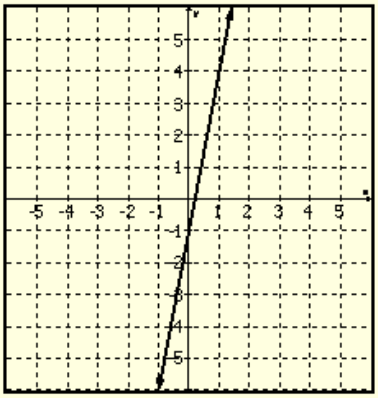
L/Q/N?	
Domain	
Range	

5.



L/Q/N?	
Domain	
Range	

6.



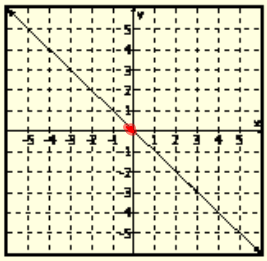
L/Q/N?	
Domain	
Range	

Algebra I - Unit 2: Topic 1

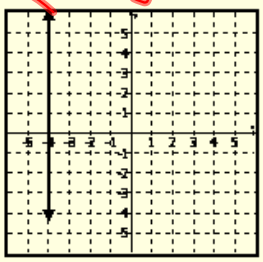
Answer the following.

7. Which graph below best represents the linear parent function?

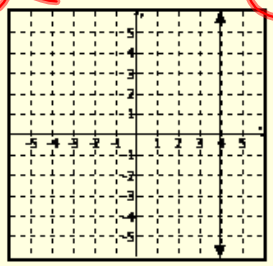
A



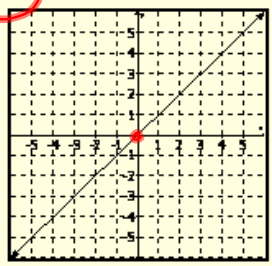
C



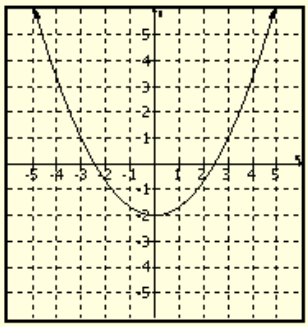
B



D

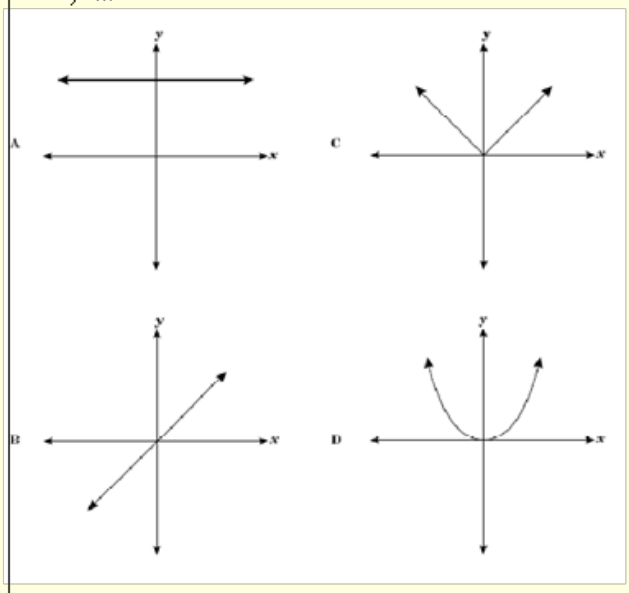


8. Which equation is the parent function of the graph represented below?

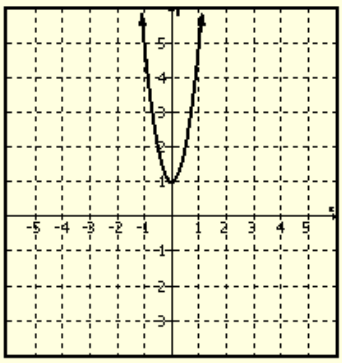


A $y = x$
B $y = |x|$
C $y = x^2$
D $y = \sqrt{x}$

9. Which is the best representation of the function $y=x$?

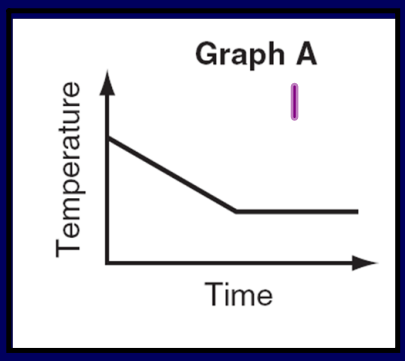


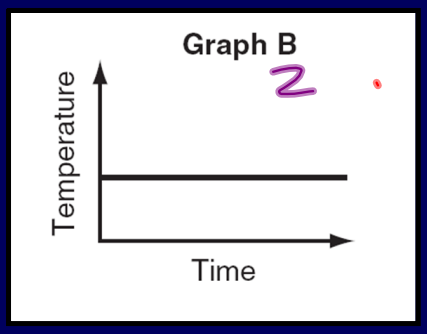
10. Which type of parent function is represented by the function graphed below?

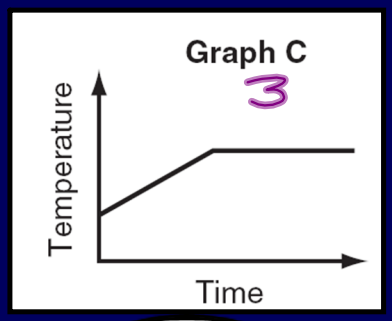


A Exponential
B Absolute value
C Linear
D Quadratic

Choose the graph that best represents each situation.

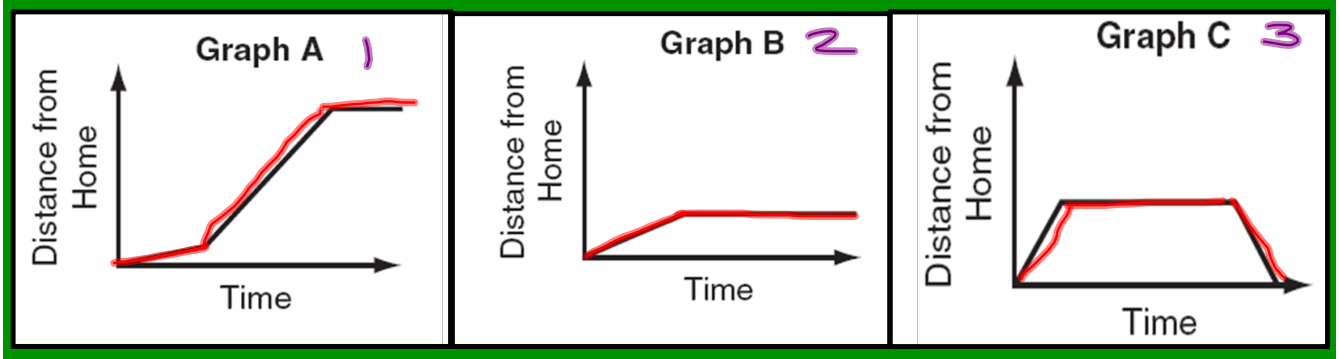






The temperature of the water in a glass cooled down steadily with the addition of ice, then remained constant when all the ice had melted.

Choose the graph that best represents each situation.



situation graphs

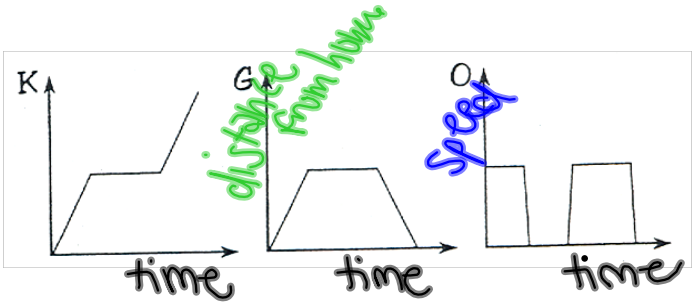
p. 31

Look at labels on axes

Choose the best graph for the given situation.
Label the axes of the chosen graph with the variables given in the parentheses.

1. Katie walked from home to the library, did some homework, then walked back. **(distance from home / time)**

2. Katie walked from home to the library, did some homework, then walked back. **(speed / time)**



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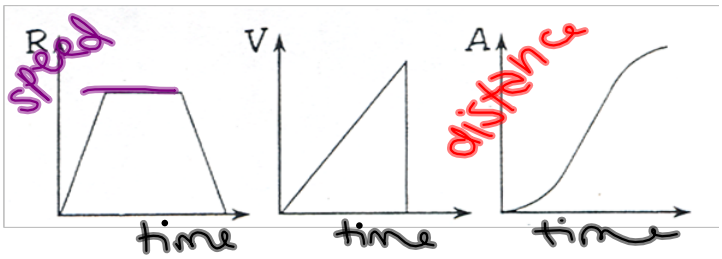
3. When jogging, Carrie starts slowly, builds up to a comfortable speed, then slows down near the end. **(distance / time)**

4. When jogging, Carrie starts slowly, builds up to a comfortable speed, then slows down near the end. **(speed / time)**



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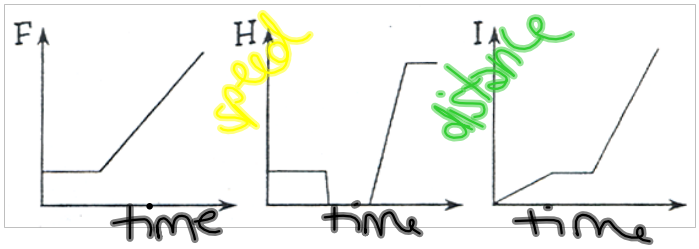
5. Mr. Sanchez walked to the subway station, waited a few minutes, then got on a train. **(distance / time)**

6. Mr. Sanchez walked to the subway station, waited a few minutes, then got on a train. **(speed / time)**



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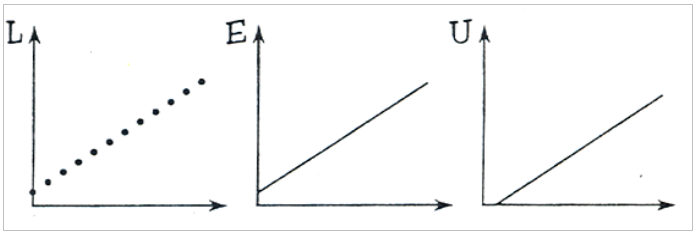
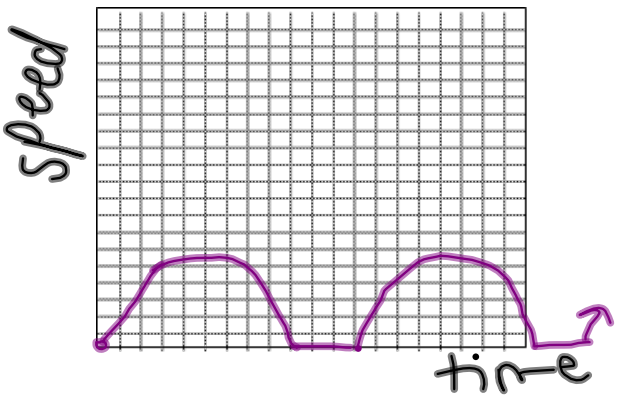
7. Tom carried a box of school yearbooks from the office to his classroom. **(weight of box / number of books in box)**

8. Every week the plant in our office is taller than the week before. **(height of plant / number of weeks)**

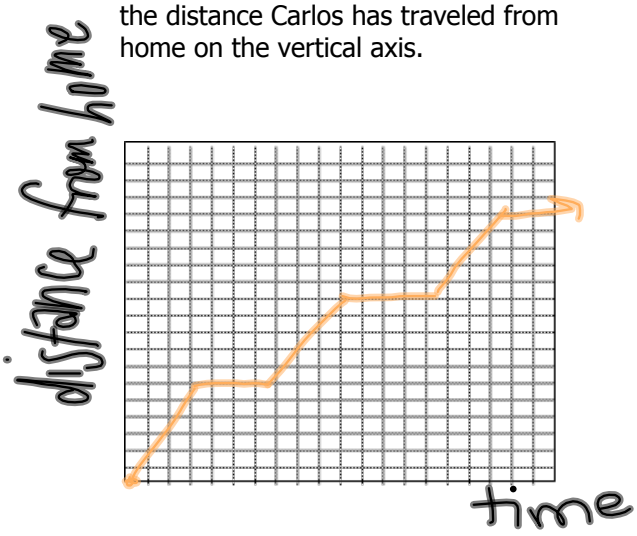


9. Carlos lives in a large city and travels to school on a local bus that stops at every block to let passengers on and off.

Graph time on the horizontal axis and the speed on of the bus on the vertical axis.



Graph time on the horizontal axis and the distance Carlos has traveled from home on the vertical axis.



Algebra I - Unit 2: Topic 2 – Situation Graphs

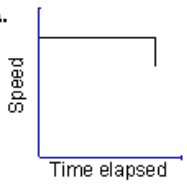
Practice – Situation Graphs pp 230-235

Name _____ Date _____ Period _____

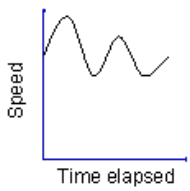
Indicate which graph matches the statement.

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

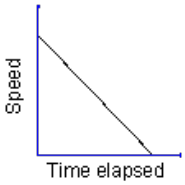
A.



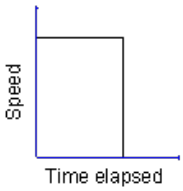
B.



C.

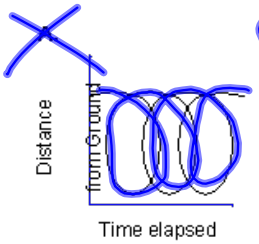


D.

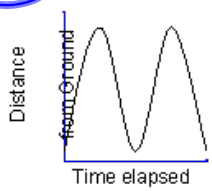


2. A man takes a ride on a Ferris wheel.

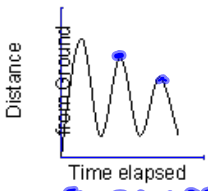
A.



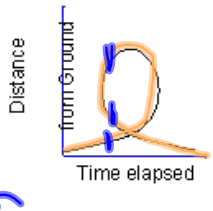
B.



C.

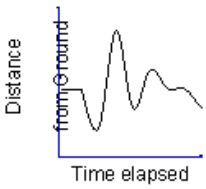


D.



4. A child swings on a swing.

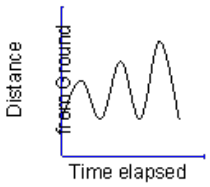
A.



B.

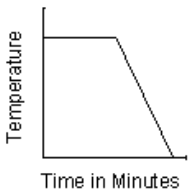
C.

D.



5. Water is boiled and then allowed to sit at room temperature.

A.



B.

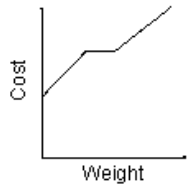
C.

D.

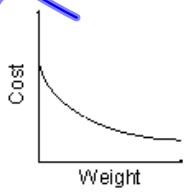
Algebra I - Unit 2: Topic 2 – Situation Graphs

6. Cost of a bag of potatoes depends upon its weight.

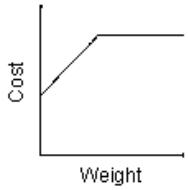
A.



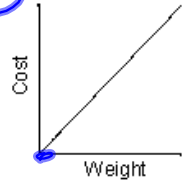
B.



C.



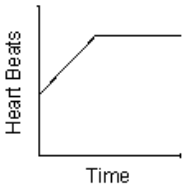
D.



7. The heart rate of a person depends on how long he has been exercising.

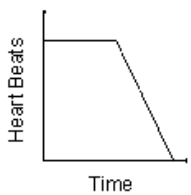
DO NOT ASSUME

A.



B.

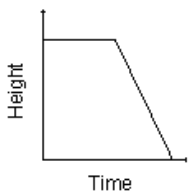
C.



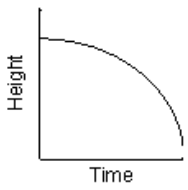
D.

8. A baseball is hit. Its height h is a function of time t.

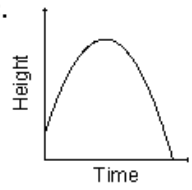
A.



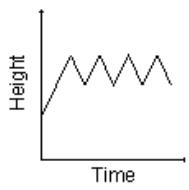
B.



C.

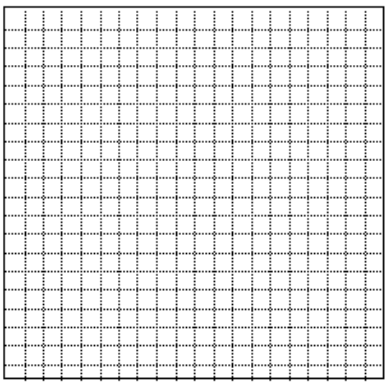


D.



Draw a graph that matches each situation. Give a label to each axis.

9. Sara walks from her home to the store. Halfway to the store, she realizes that she forgot to bring money, so she turns around, returns home, gets her money, and then walks all the way to the store. Graph time on the horizontal axis and distance from home on the vertical axis.



objective:
You will interpret situations in terms of given graphs and create situations that fit given graphs

situation graphs

agenda

Warm-Up

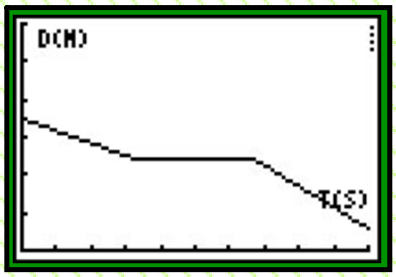
Notes

Homework

quiz tmr!

warm-up

Choose the answer that best represents the graph shown below.



A. Ashton started about 4 meters away from the CBR. He walked away slowly for 3 seconds, then stopped and stood still for 4 seconds. He then walked towards the CBR at the same pace.

B. Luis started about 4 meters away from the CBR. He walked towards the CBR slowly for 3 seconds, then stopped and stood still for 4 seconds. He then walked towards the CBR at the same pace.

C. Daysi started about 4 meters away from the CBR. She walked towards the CBR slowly for 3 seconds, then stopped and stood still for 4 seconds. The she walked away from the CBR at the same pace.

D. Noemi started about 4 feet away from the CBR, stood still for 3 seconds, walked away from the CBR for 4 seconds, then stood still until the end.

exit ticket

on a sticky note, solve the following problem

BE SURE TO WRITE YOUR NAME

4. Which of the following equations can be used to find the measure of two supplementary angles, where the measur of one angle is 5 more than triple the other?

A. $3x+5=180$

B. $4x+5=180$

C. $5x+3x=180$

D. $3x=180$