

Learning Target - I can evaluate a function.

1. Evaluate  $f(x) = 4x - 3$  for  $f(-4)$ . (1 point)

$$f(-4) = 4(-4) - 3 = -16 - 3 = -19$$

Learning Target - I can determine whether an ordered pair is a solution to the function or not.

2. For the following input/output table, determine which of the following ordered pairs are solutions to the function  $f(x) = 1/4 x - 6$ . Write YES or NO for each one. (1 point each)

| IN $x$ | $f(x)$ out | $f(x) = 1/4 x - 6$<br>Show work here. | YES<br>or<br>NO |
|--------|------------|---------------------------------------|-----------------|
| $-8$   | $-10$      | $f(-8) = 1/4(-8) - 6$                 | N               |
| $0$    | $-6$       | $f(0) = 1/4(0) - 6$                   | Y               |
| $4$    | $-4$       | $f(4) = 1/4(4) - 6$                   | N               |
| $8$    | $-1$       | $f(8) = 1/4(8) - 6$                   | N               |

Learning Target - I can determine whether a relation is a function and identify the domain and range. (2 pts. each)

3.)

$\{(-3, 4), (1, 7), (-3, 3), (-3, 7)\}$

DOMAIN:

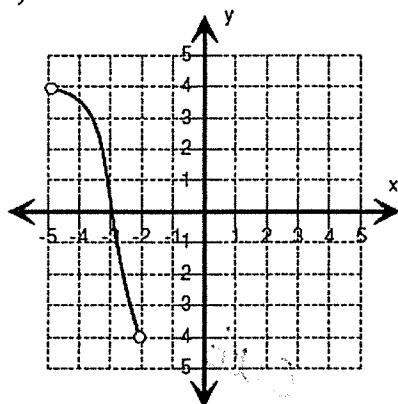
RANGE:

FUNCTION: YES or NO

Reason:

The Domain -3 repeats

4.)



Domain:

$(-5, -2)$

Range:

$(-4, 4)$

FUNCTION: YES or NO

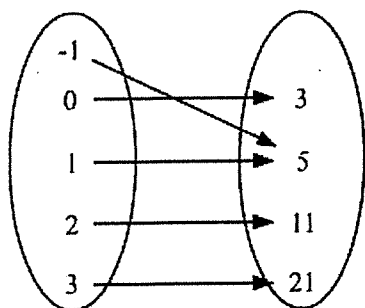
Reason:

Passes VLT

5.)

Domain

Range



Domain:

$\{-1, 0, 1, 2, 3\}$

Range:

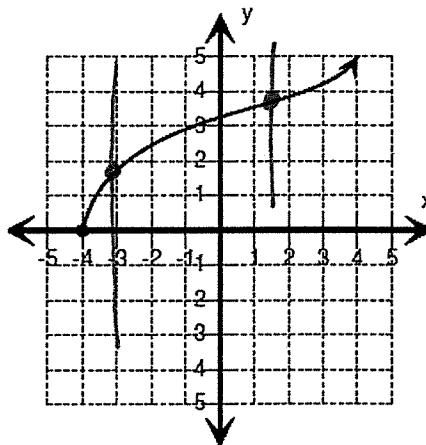
$\{3, 5, 11, 21\}$

FUNCTION: YES or NO

Reason:

No domain value is repeated

6.)



Domain:

$[-4, \infty)$

Range:

$[0, \infty)$

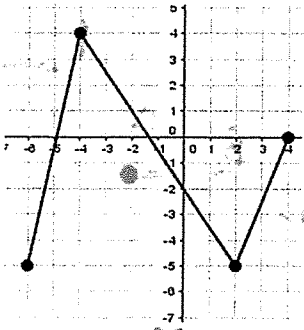
FUNCTION: YES or NO

Reason:

Passes VLT

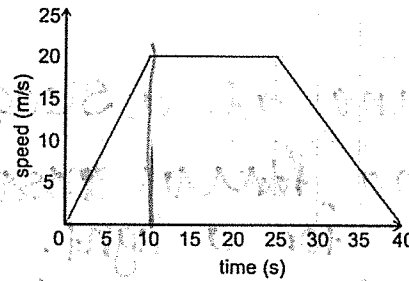
Learning Goal: I can identify increasing, decreasing and constant intervals on a graph.

7.)



Increasing:  $[-6, -4], [2, 4]$   
 Decreasing:  $[-4, 2]$   
 Constant: \_\_\_\_\_

8.)



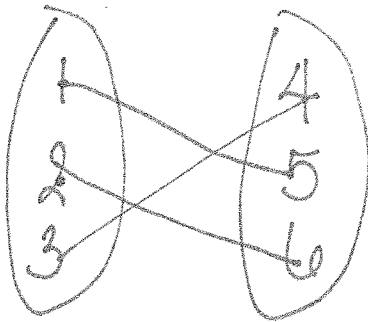
Increasing:  $[0, 10]$   
 Decreasing:  $[25, 40]$   
 Constant:  $[10, 25]$

Learning Target: I can explain the vertical line test using domain and range.

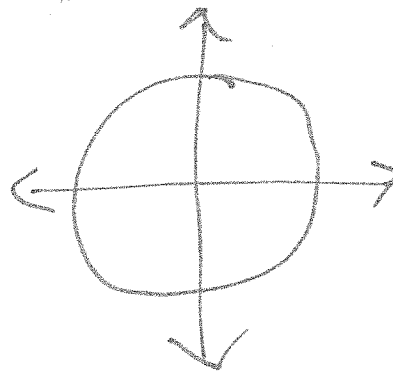
9. Part 1: Explain how the vertical line test determines if a relation is a function. Use the terms domain and range in your explanation. (2 points)

The VLT determines if a relation is a function because if a domain value is repeated the vertical line will touch the graph twice. Range values can be repeated.

Function



Not a Function



Learning Target: I can answer questions about a story problem by analyzing its graph

10.) Sandra left school and walked back home as shown in the accompanying graph.

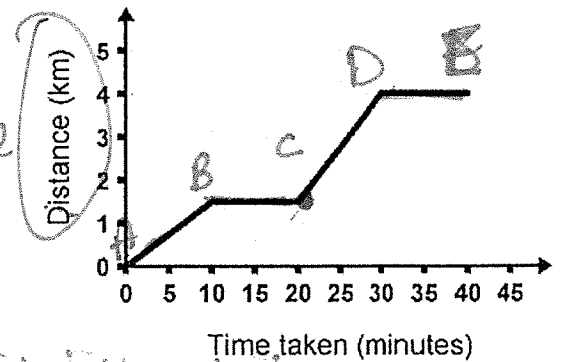
a) Describe each of the intervals:

AB: Walking at a steady pace

BC: Stopping ~~for a moment~~  
to wait for a light.

CD: Continued walking home.

DE: Arrived home.



b) What is one possible interpretation of the section of the graph from B and C?

1- Sandra Arrived at School

2- Sandra saw her friends on the way and stopped to talk to them

3- Sandra returned home to get her backpack

4- Sandra went up a hill

c) How long did Sandra stay in class?