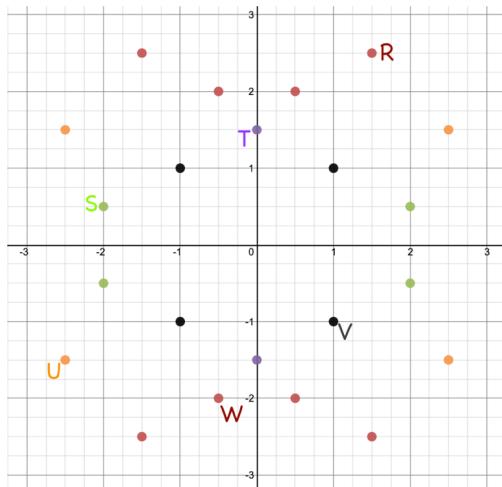


Name _____

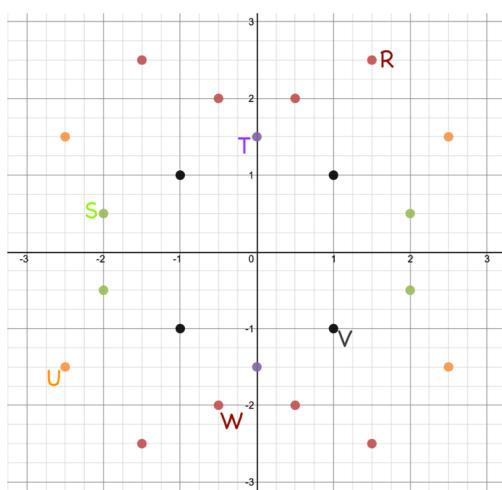
Directions: When working each of the following questions, be sure to show all work.

1) Determine the coordinates for point U

- a) $(-\frac{1}{2}, -2)$
- b) $(-2.5, -1.25)$
- c) $(-2.5, -1.5)$
- d) $(-2.5, 1.5)$

**2)** Determine which point is located at $(0, 1\frac{1}{2})$

- a) S
- b) T
- c) V
- d) W



3) Is the function represented by the table proportional or non-proportional?

a) Proportional; $\frac{y}{x} = \frac{-3}{-1} = \frac{6}{2} = \frac{9}{3} = \frac{12}{4}$

x	-1	2	3	4
y	-3	6	9	12

b) Proportional; $\frac{y}{x} = \frac{-1}{-3} = \frac{0}{1} = \frac{1}{3} = \frac{3}{9}$

c) Non – proportional; the function is not $y = mx$

d) Non – proportional; this function would not pass the vertical line test

4) Determine whether the relation is a function.

a) Not a function; each x – value needs exactly one y – value

x	y
-2	4
-1	1
0	0
1	1
2	4

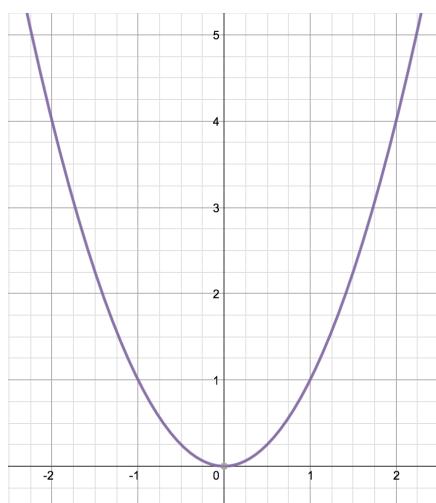
b) Not a function; graph fails the vertical line test

c) Not a function; the same y – value appears for different x – values

d) This is a function; it passes the VLT

5) Determine whether the relation is a function.

a) Not a function; each x needs exactly one y



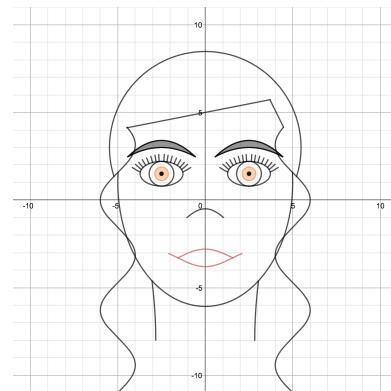
b) Not a function; graph fails the vertical line test

c) Not a function; the function is not $y = mx$

d) This is a function; it passes the VLT

6) Determine whether the graph represents a function.

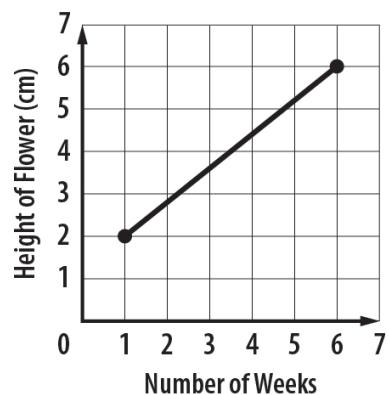
- a) This is a function; each x has exactly one y
- b) Not a function; graph fails the vertical line test
- c) Not a function; graph is represented by $y = mx + b$
- d) This is a function; it passes the VLT



7) The height of the flower is measured for several weeks.

The graph shows the height of the flower for each week.
Determine and interpret the rate of change.

- a) The rate of change is $\frac{1}{2}$ for the height of flowers
- b) The rate of change is 1 flower each week
- c) The rate of change is $\frac{4}{5}$, the flower grows at a rate of 4cm every 5 weeks
- d) The rate of change is 2, the flower grows at a rate of 2cm per week



8) Adult tickets for the movie theater cost \$7.50 each. Write an equation that can be used to find the total cost c of any number of adult tickets t . Then use the equation to determine how much 8 adult tickets would cost.

- a) $c = 7.5t$; 8 tickets cost \$56.50
- b) $c = 7.5t$; 8 tickets cost \$57.50
- c) $c = 7.5t$; 8 tickets cost \$60
- d) $c = 7.5t$; 8 tickets cost \$60.50

9) Determine the domain and range of the relation $\{(5, 4), (0, -3), (2, -3), (-6, 5)\}$.

a)

$$D: \{-3, 0, 4, 5\}$$

$$R: \{-6, -3, 2\}$$

b)

$$D: \{-6, 0, 2, 5\}$$

$$R: \{-3, 4, 5\}$$

c)

$$D: \{-3, 4, 5\}$$

$$R: \{-6, 0, 2, 5\}$$

d)

$$D: \{-6, -3, 2\}$$

$$R: \{-3, 0, 4, 5\}$$

10) The table shows the amount of money Ali is paid for working different numbers of hours. What would be Ali's total pay if he works for 27 hours in a week?

a) \$351

b) \$378

c) \$387

d) \$392

<i># of hours</i>	<i>\$ paid</i>
3	42
5	70
7	98
9	126

11) Use the function table to determine if $y = 5x - 1$ is a function.

- a) This is a function; each x – value has exactly one y – value
- b) This is a function; it fails the VLT
- c) Not a function; the function is not $y = mx$
- d) Not a function; each x – value has more than one y – value

x	y
-2	
-1	
0	
1	
2	

12) Each total ticket price shown in the table below includes an \$8.50 service fee. If the price per ticket is constant, how much can Greg expect to pay for 9 tickets, including the service fee?

- a) \$104.50
- b) \$108.50
- c) \$112.50
- d) \$116.50

# of tickets	\$ Total Paid
4	\$56.50
9	?
12	\$152.50
14	\$176.50

13) The admission for the chess team to go to the waterpark can be represented by the equation $y = 8x - 2$, where y is the total cost of admission for x students. Determine whether the function is proportional or non-proportional. Explain.

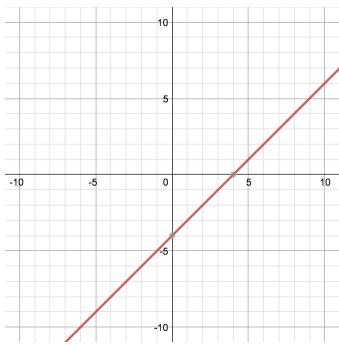
- a) proportional; the function is written in $y = mx$ form
- b) proportional; the function is written in $y = mx + b$ form
- c) non – proportional; the function is written in $y = mx$ form
- d) non – proportional; the function is written in $y = mx + b$ form

14) Clark starts out with a certain number of baseball cards and plans to collect 8 each month. At the end of a year, he has 109 baseball cards. Assume the relationship is linear. Determine and interpret the rate of change and the initial value.

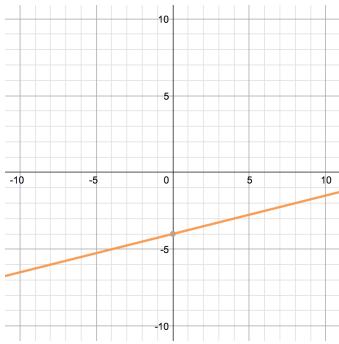
- a) rate = 8 cards per month; initial value = 96
- b) rate = 8 cards per month; initial value = 101
- c) rate = 8 cards per month; initial value = 13
- d) rate = 8 cards per month; initial value = 12

15) Which graph represents the function $y = \frac{4}{3}x - 4$

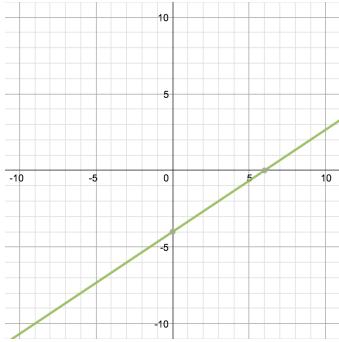
a) $y = \frac{4}{3}x - 4$



b) $y = \frac{4}{3}x - 4$



c) $y = \frac{4}{3}x - 4$



d) $y = \frac{4}{3}x - 4$

