

## Extra Review for Functions Quiz

1. List the domain and range of the relation represented in the table below.

x	y
2	0
1	3
0	6
-1	9

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

2. List the domain and range of the relation represented in the table below.

x	y
-10	7
-8	4
-6	-2
-4	-2

Domain: \_\_\_\_\_

Range: \_\_\_\_\_

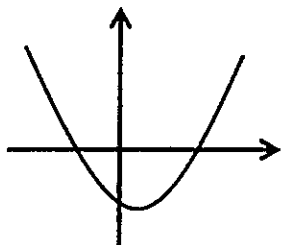
3. Which of the follow relations is a function?

- A)  $\{(4,2), (3,4), (4,5)\}$   
 B)  $\{(6,2), (7,2), (6,2)\}$   
 C)  $\{(8,4), (3,6), (8,8)\}$   
 D)  $\{(4,5), (5,6), (6,8)\}$

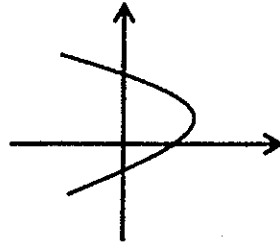
4. Which of the following relations is NOT a function?

- A)  $\{(4,1), (3,2), (4,3)\}$   
 B)  $\{(1,2), (2,3), (3,4)\}$   
 C)  $\{(5,6), (6,7), (8,9)\}$   
 D)  $\{(-7,8), (7,6), (-6,9)\}$

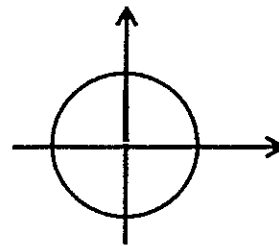
5. Identify if the graphs below represent a function. Write "function" or "not a function".



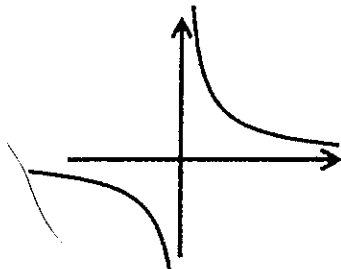
a.



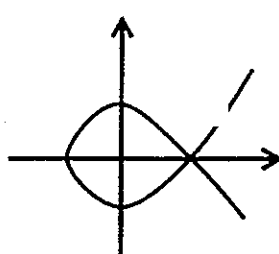
b.



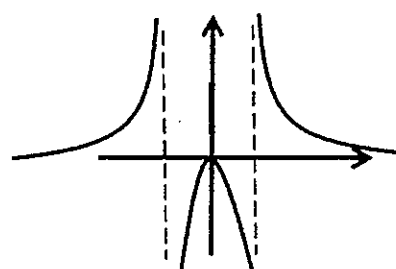
c.



d.

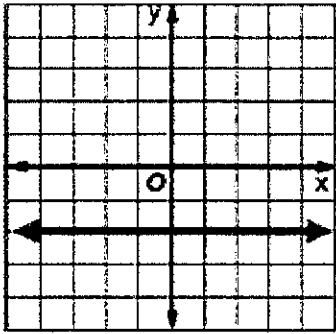


e.

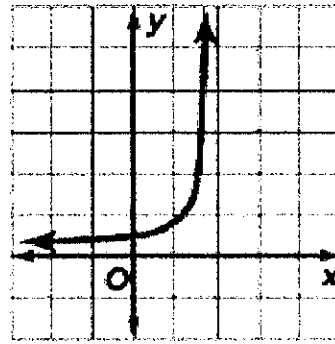


f.

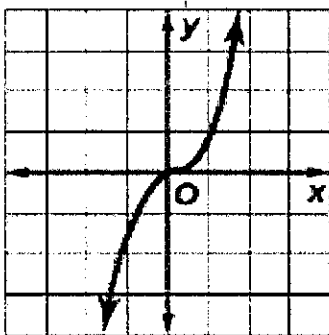
6. Identify the graphs below as linear or non-linear.



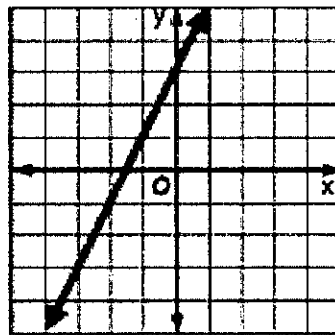
a.



b.

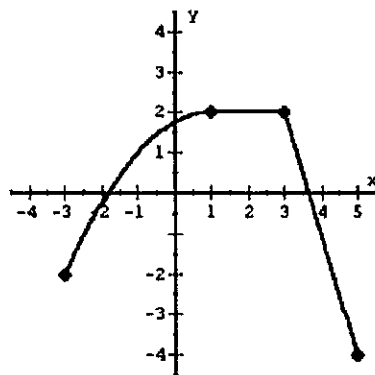


c.



d.

7. Identify the intervals on the graph below based on the descriptions.



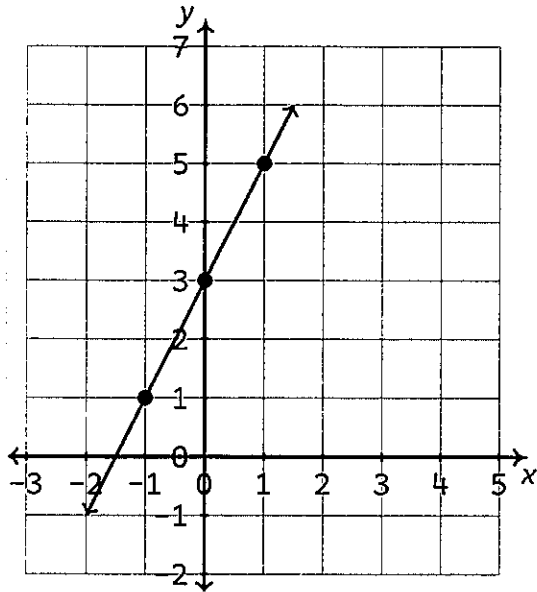
a. For what x-values is the graph linear and decreasing?

From  $x =$  \_\_\_\_\_ to  $x =$  \_\_\_\_\_

b. For what x-values is the graph non-linear and increasing?

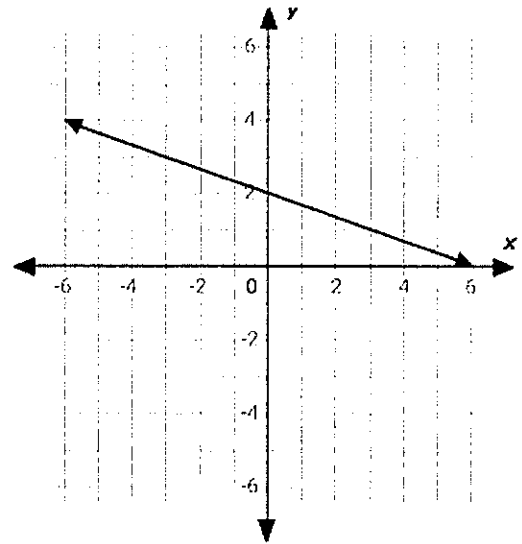
From  $x =$  \_\_\_\_\_ to  $x =$  \_\_\_\_\_

8. Determine the rate of change for the graph below.



R.O.C.: \_\_\_\_\_

9. Determine the rate of change for the graph below.



R.O.C.: \_\_\_\_\_

10. Nicholas mows lawns over the summer and saves the same amount of money each week in his bank account. The amount of money he saved after different numbers of months is shown in the following table.

Months of savings, $x$	Total Amount saved (in \$), $y$
8	2000
11	2600
14	3200
17	3800

**Part A:** Determine the rate of change for the function. \_\_\_\_\_

**Part B:** Determine the y-intercept for the function. \_\_\_\_\_

**Part C:** Write the equation that represents this function in  $y = mx + b$  form. \_\_\_\_\_

Extra Review for Functions Quiz

1. List the domain and range of the relation represented in the table below.

x	y
2	0
1	3
0	6
-1	9

X-values  
Domain:  $\{-1, 0, 1, 2\}$

Y-values  
Range:  $\{0, 3, 6, 9\}$

\*Numerical order, NO Repeats →

2. List the domain and range of the relation represented in the table below.

x	y
-10	7
-8	4
-6	-2
-4	-2

Domain:  $\{-10, -8, -6, -4\}$

Range:  $\{-2, 4, 7\}$

3. Which of the follow relations is a function? → X-values do not repeat

A)  $\{(4,2), (3,4), (4,5)\}$

B)  $\{(6,2), (7,2), (6,2)\}$

C)  $\{(8,4), (3,6), (8,8)\}$

D)  $\{(4,5), (5,6), (6,8)\}$

y-values can repeat

4. Which of the following relations is NOT a function?  
↓  
X-values DO repeat

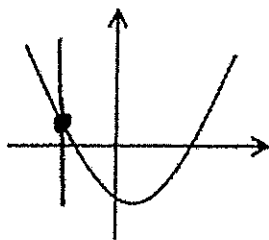
A)  $\{(4,1), (3,2), (4,3)\}$

B)  $\{(1,2), (2,3), (3,4)\}$

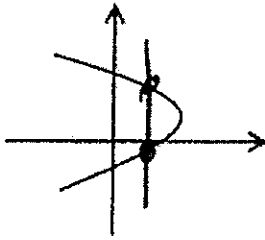
C)  $\{(5,6), (6,7), (8,9)\}$

D)  $\{(-7,8), (7,6), (-6,9)\}$

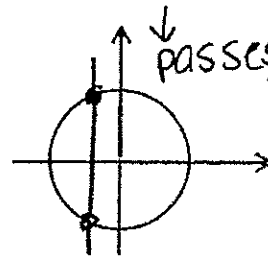
5. Identify if the graphs below represent a function. Write "function" or "not a function".



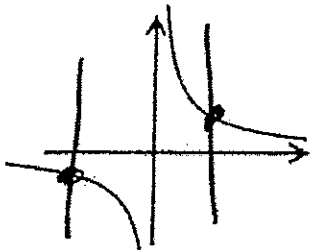
a. Function



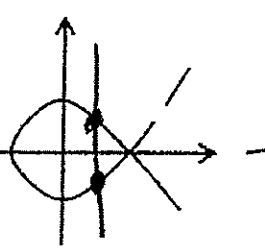
b. NOT a function



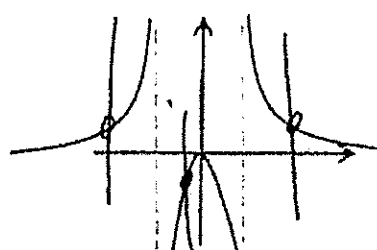
c. NOT a function



d. Function



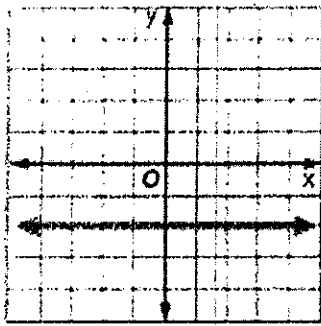
e. NOT a function



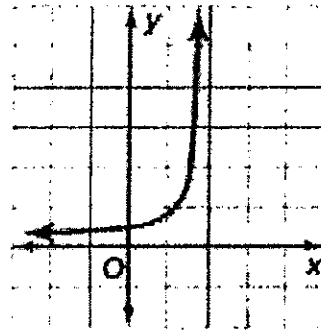
f. Function

straight line

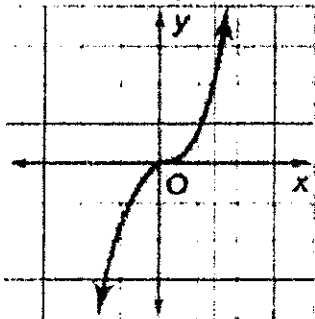
6. Identify the graphs below as linear or non-linear. <sup>↗</sup> not a straight line



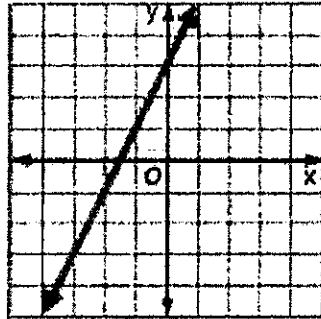
a. linear



b. non-linear

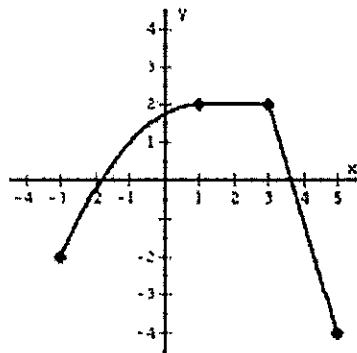


c. non-linear



d. linear

7. Identify the intervals on the graph below based on the descriptions.



a. For what x-values is the graph linear and decreasing?

From x = 3 to x = 5  
 start finish

→ negative slope

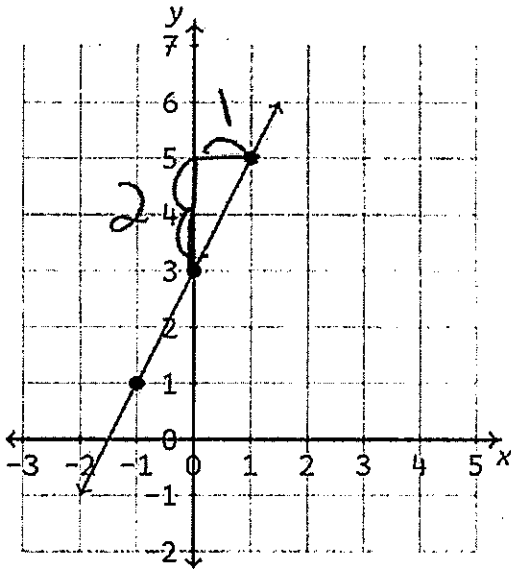
b. For what x-values is the graph non-linear and increasing?

From x = -3 to x = 1  
 start finish

→ positive slope

Slope

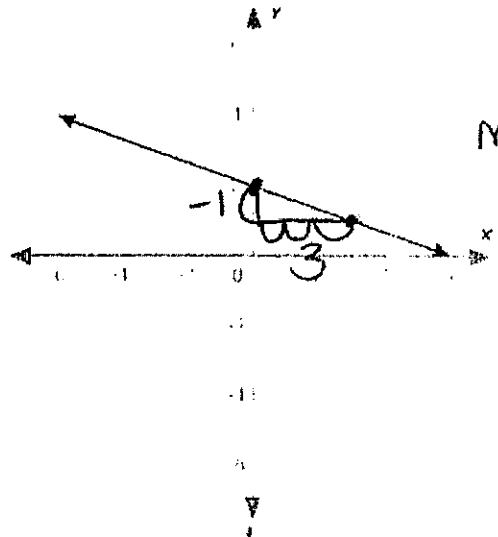
8. Determine the rate of change for the graph below.



R.O.C.: 2

Slope

9. Determine the rate of change for the graph below.



R.O.C.:  $-\frac{1}{3}$

10. Nicholas mows lawns over the summer and saves the same amount of money each week in his bank account. The amount of money he saved after different numbers of months is shown in the following table.

Months of savings, x	Total Amount saved (in \$), y
8	2000
11	2600
14	3200
17	3800

Slope

Part A: Determine the rate of change for the function.

$(8, 2000)$   $(11, 2600)$   
 $x_1, y_1$   $x_2, y_2$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{2600 - 2000}{11 - 8}$$

$$m = \frac{600}{3} \quad m = 200$$

Part B: Determine the y-intercept for the function.

$(8, 2000)$   
 $x \quad y$

$$m = 200$$

$$y = mx + b$$

$$2000 = (200)(8) + b$$

$$2000 = 1600 + b$$

$$\underline{-1600 \quad -1600}$$

$$b = 400$$

Part C: Write the equation that represents this function in  $y = mx + b$  form.

$$y = 200x + 400$$

$$y = mx + b$$

$$m = 200$$

$$b = 400$$