Homework: Domain and Range day 2

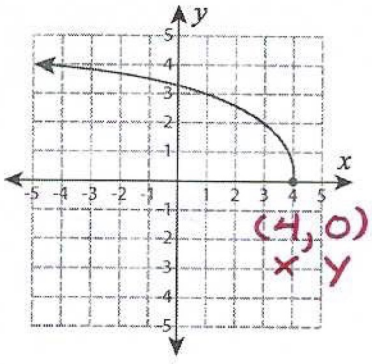
Name: Key

Alg. 1 H – Date: Feb. 27 glue on page 52

created for you by Ms. Khotsoubanh

Directions: Find the domain and the range for each graph. Then state if the graph is a function. Use the vertical line test to see if it is a function.

1)



Domain: $x \leq 4$

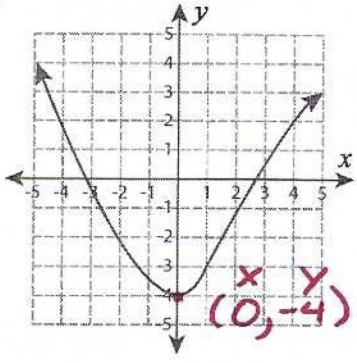
$(-\infty, 4]$

Range: $y \geq 0$

$[0, \infty)$

Is it a function? yes

2)



Domain: all real #s

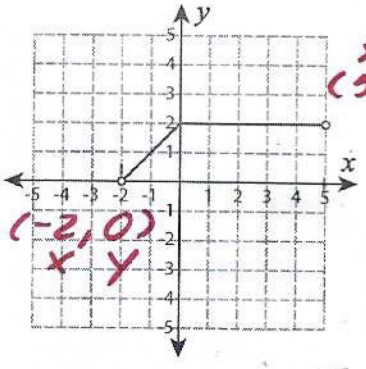
$(-\infty, \infty)$

Range: $y \geq -4$

$[-4, \infty)$

Is it a function? yes

3)



Domain: $-2 < x \leq 5$

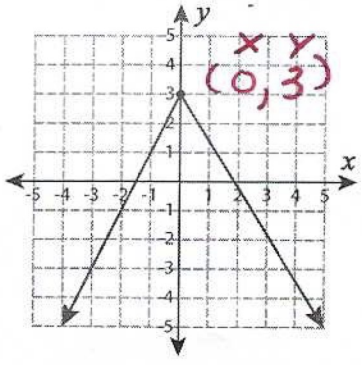
$(-2, 5]$

Range: $0 < y \leq 2$

$(0, 2]$

Is it a function? yes

4)



Domain: all real #s

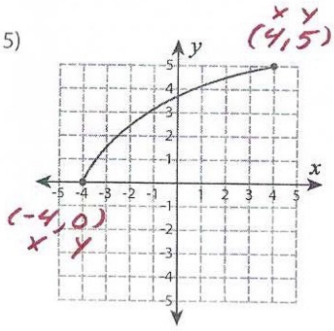
$(-\infty, \infty)$

Range: $y \leq 3$

$(-\infty, 3]$

Is it a function? yes

5)



Domain: $-4 \leq x \leq 4$

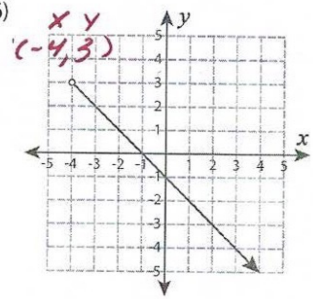
$[-4, 4]$

Range: $0 \leq y \leq 5$

$[0, 5]$

Is it a function? yes

6)



Domain: $x > -4$

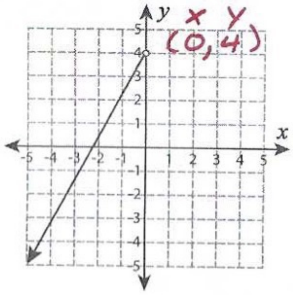
$(-4, \infty)$

Range: $y < 3$

$(-\infty, 3)$

Is it a function? yes

7)



Domain: $x < 0$

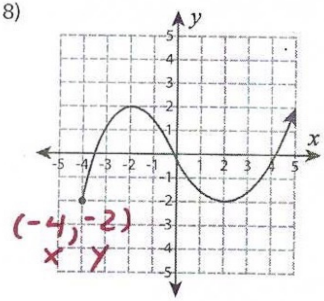
$(-\infty, 0)$

Range: $y < 4$

$(-\infty, 4)$

Is it a function? yes

8)



Domain: $x \geq -4$

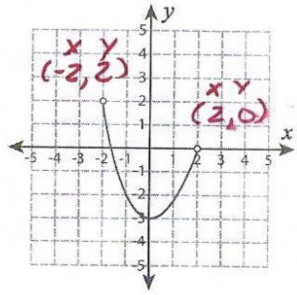
$[-4, \infty)$

Range: $y \geq -2$

$[-2, \infty)$

Is it a function? yes

9)



Domain: $-2 < x < 2$

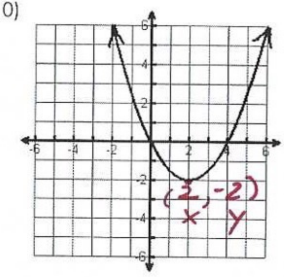
$(-2, 2)$

Range: $-3 \leq y < 2$

$[-3, 2)$

Is it a function? yes

10)



Domain: all real #s

$(-\infty, \infty)$

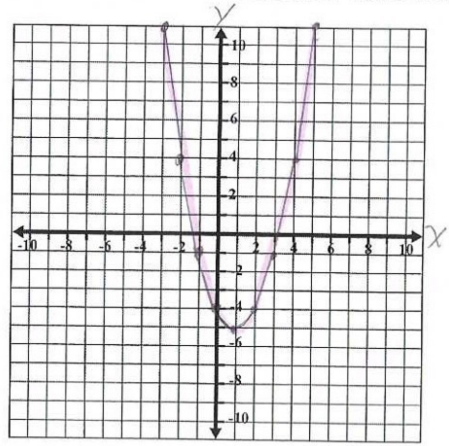
Range: $y \geq -2$

$[-2, \infty)$

Is it a function? yes

11) Review: **show work on page 53**

- Graph a quadratic function with a vertex of (1, –5) and has an a value of 1.
- Rewrite the equation in vertex form. (hint: look at #1 warm-up 2/26)
- Find the zeros of the function. Round to the nearest tenth.



(x, y)

11.) vertex $(1, -5)$

$f(x) = (x-1)^2 - 5$ ← vertex form

$0 = (x-1)^2 - 5$

$+5 \qquad +5$

$\sqrt{5} = \sqrt{(x-1)^2}$ * take the square root $\sqrt{}$ to get rid of the square

$\pm\sqrt{5} = x - 1$

$+1 \qquad +1$

$1 \pm \sqrt{5} = x$

3.2 -1.2

The zeros are 3.2 & -1.2