AGS 2
Module 04 Review

Name_____
Period _____

1. Solve each of these equations for their solution(s).

a) $|x| = 20$

b) $|x - 2| = 11$

c) $|x + 6| = 3$

d) $3|x - 2| = 24$

e) $7|2x - 5| + 4 = 18$

f) $\frac{3}{4}|x + 1| - 5 = 13$

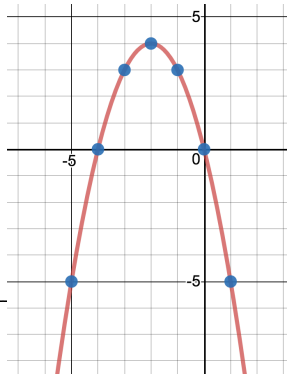
2. Use the Graph to determine the indicated function values.

a) *f(0)* = _____

f(-3) = _____

f(1) = _____

If *f(x)* = 4, x = ____

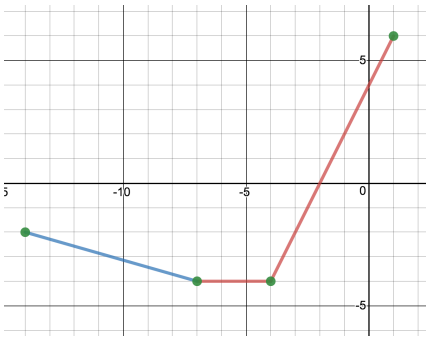


b) *g(-4)* = _____

g(0) = _____

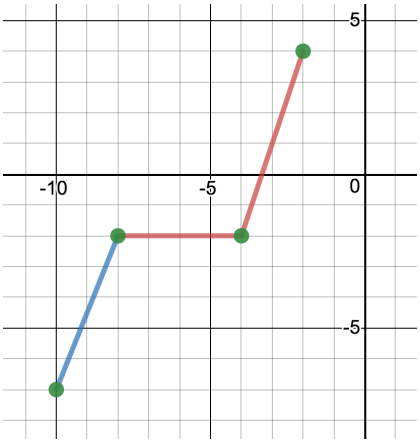
g(-6) = _____

g(-14) = _____



If *g(x)* = -2, x= _____

3. State the domain of each piece, then the domain and range of the entire graph.



Interval 1 _____

Interval 2 _____

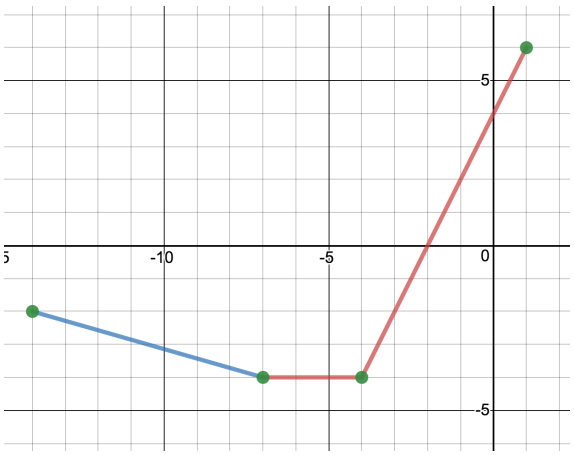
Interval 3 _____

Domain _____

Range _____

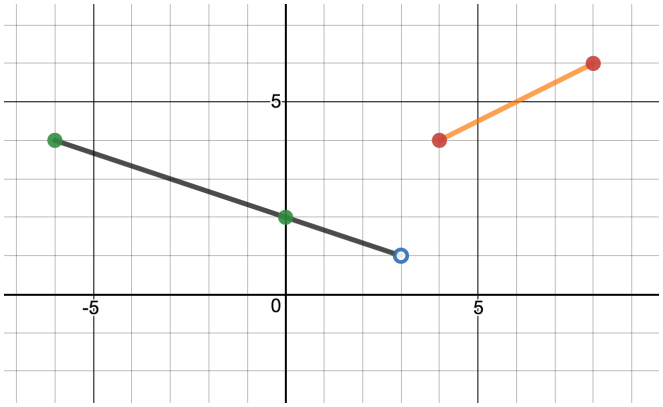
4. Find the piecewise function for each of the graphs. Use domain restrictions and use proper notation.

a)



$$f(x) = \begin{cases} \_\_\_\_\_, \_\_\_\_\_ \\ \_\_\_\_\_, \_\_\_\_\_ \\ \_\_\_\_\_, \_\_\_\_\_ \end{cases}$$

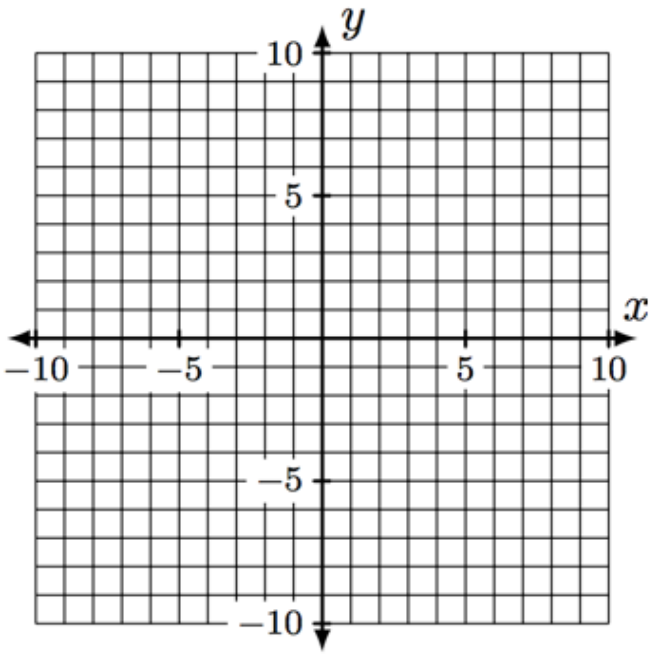
b)



$$f(x) = \begin{cases} \_\_\_\_\_, \_\_\_\_\_ \\ \_\_\_\_\_, \_\_\_\_\_ \end{cases}$$

5. Graph this piecewise function.

$$f(x) = \begin{cases} y = x\ , & 5 \le x \le 8 \\ y = \frac{1}{5}x + 4\ , & 0 \le x < 5 \\ y = -3x + 4\ , & -2 \le x < 0 \end{cases}$$

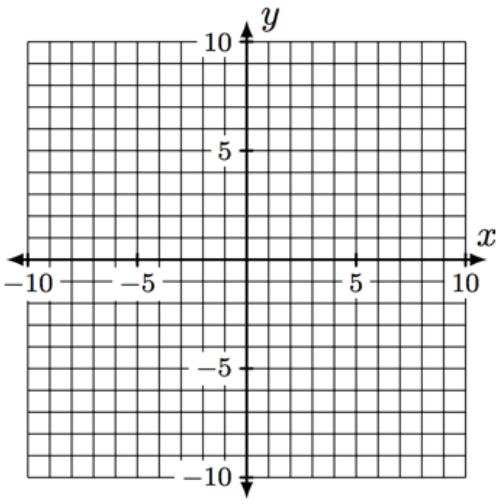


6. Write the absolute value function for the piecewise function

$g(x) = \begin{cases} -2(x+6)-7, & x < -6 \\ 2(x+6)-7, & x \geq -6 \end{cases}$ then graph the function and identify the vertex.

$g(x) =$ _____

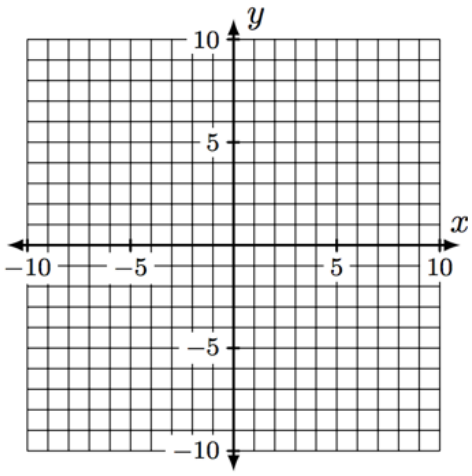
Vertex: _____



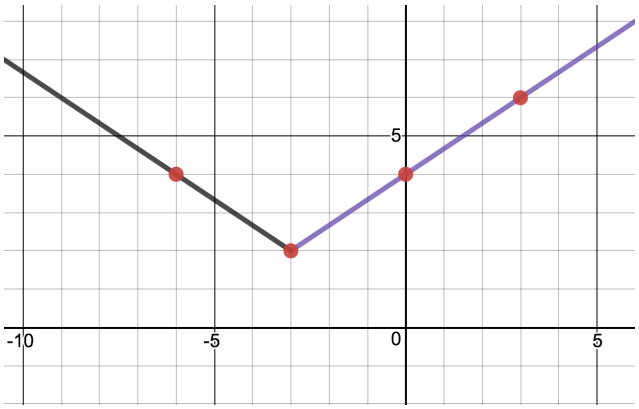
7. Write the piecewise function for the absolute value function $f(x) = |x-5| + 2$, then graph the function and identify the vertex.

$g(x) =$

Vertex: _____



8. Given the graph, g(x), find the piecewise function and the absolute value function



Abs. Value: *g(x)* = _____

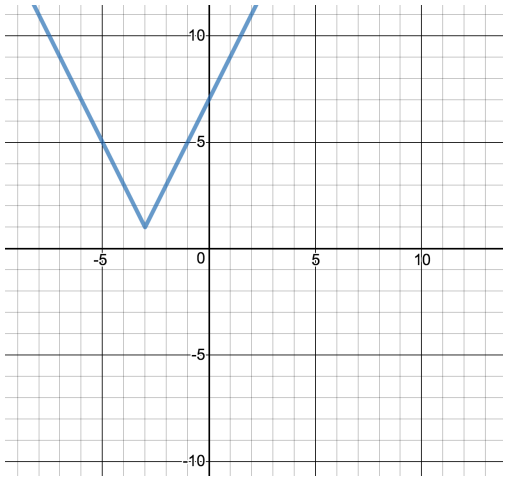
Piecewise: *g(x)* =

9. Find the inverse of each relation shown below. Determine whether the inverse is a function or not. Explain why or why not.

Inverse:

x	2	1	0	-1	-2
f(x)	5	2	1	2	5

10. Given the graph below, draw in the line of reflection (y = x). Then graph the inverse of the function. Determine if the inverse is a function or not. Explain why or why not.



11. Find the inverse for each function.

a) $f(x) = 2x - 6$

b) $f(x) = \sqrt{2x - 8}$

c) $f(x) = \frac{x-12}{3}$