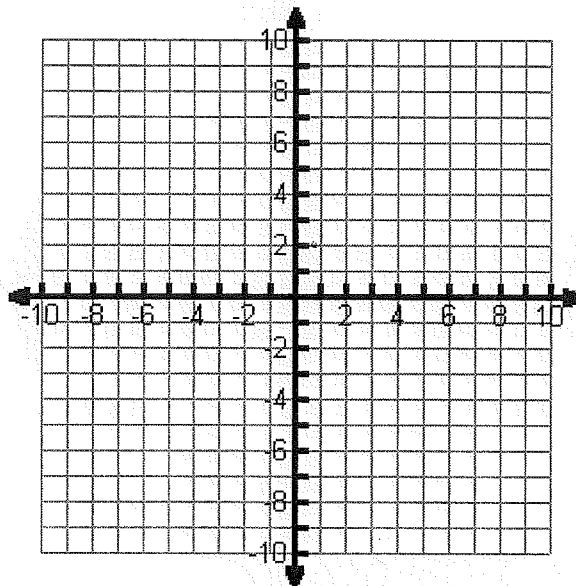


VIT4 Formative Extra Practice

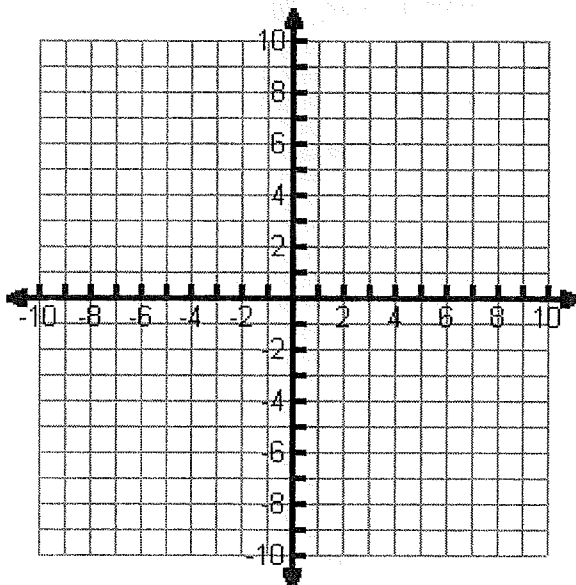
Name: _____

Part I. Graph each of the following piecewise functions. Identify any points of discontinuity.

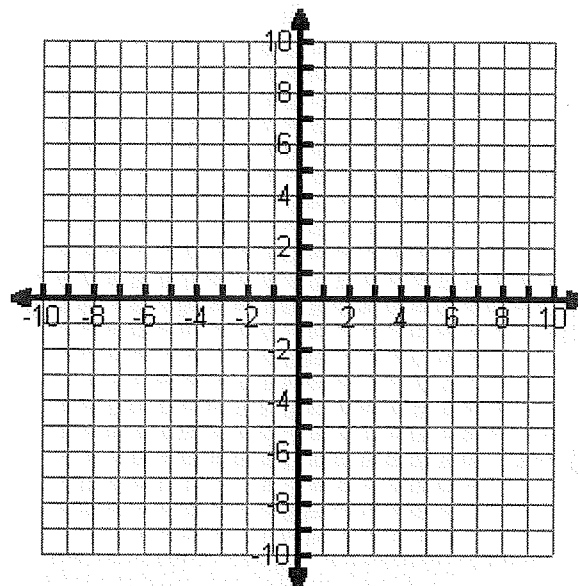
1.
$$f(x) = \begin{cases} (x+5)^2 & \text{if } x < -2 \\ -4 & \text{if } x \geq -2 \end{cases}$$



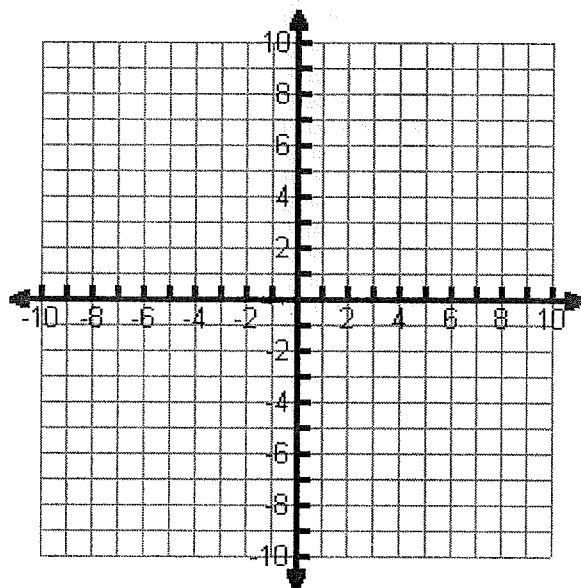
2.
$$f(x) = \begin{cases} 2x+1 & \text{if } x < 1 \\ -2x+3 & \text{if } x \geq 1 \end{cases}$$



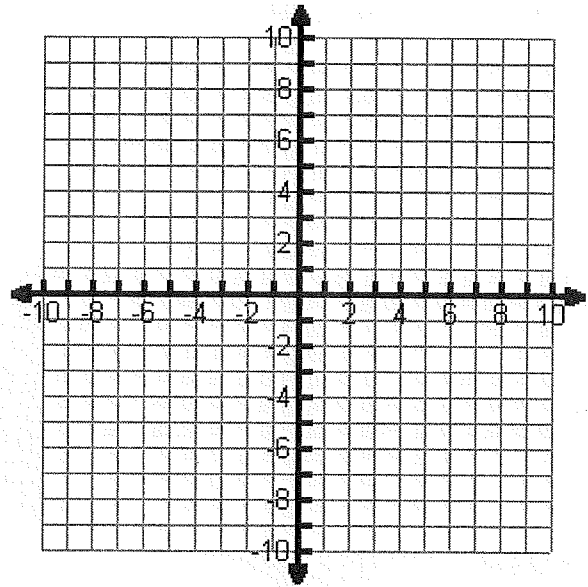
$$3. \quad f(x) = \begin{cases} -2x - 4 & \text{if } x \leq 2 \\ 4x - 9 & \text{if } x > 2 \end{cases}$$



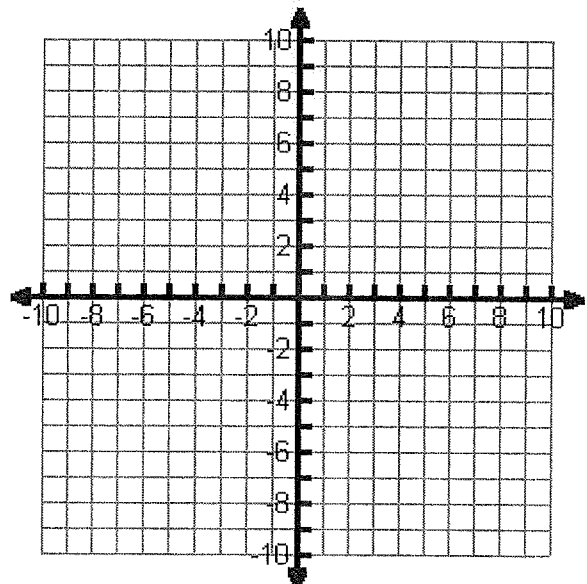
$$4. \quad f(x) = \begin{cases} x - 1 & \text{if } x \leq -2 \\ 2x - 1 & \text{if } -2 < x \leq 4 \\ -3x + 8 & \text{if } x > 4 \end{cases}$$



5.
$$f(x) = \begin{cases} x^2 & \text{if } x \leq -1 \\ -x+4 & \text{if } x > -1 \end{cases}$$



6.
$$f(x) = \begin{cases} 5 & \text{if } x < -2 \\ \frac{1}{2}x - 6 & \text{if } -2 \leq x \leq 6 \\ -2x + 10 & \text{if } x > 6 \end{cases}$$



Part II. Evaluate the piecewise function for the given values of x .

1. $f(x) = \begin{cases} x+5 & \text{if } x < -2 \\ -4 & \text{if } x \geq -2 \end{cases}$

$f(3) =$

$f(-4) =$

$f(-2) =$

2. $f(x) = \begin{cases} 2x+1 & \text{if } x < 1 \\ -2x+3 & \text{if } x \geq 1 \end{cases}$

$f(-2) =$

$f(6) =$

$f(1) =$

3. $f(x) = \begin{cases} -2x-4 & \text{if } x \leq 2 \\ 4x-9 & \text{if } x > 2 \end{cases}$

$f(-4) =$

$f(8) =$

$f(2) =$

4. $f(x) = \begin{cases} x-1 & \text{if } x \leq -2 \\ 2x-1 & \text{if } -2 < x \leq 4 \\ -3x+8 & \text{if } x > 4 \end{cases}$

$f(-1) =$

$f(-4) =$

$f(5) =$

5. $f(x) = \begin{cases} x & \text{if } x \leq -1 \\ -x+4 & \text{if } x > -1 \end{cases}$

$f(-4) =$

$f(0) =$

$f(3) =$

6. $f(x) = \begin{cases} 5 & \text{if } x < -2 \\ \frac{1}{2}x-6 & \text{if } -2 \leq x \leq 6 \\ -2x+10 & \text{if } x > 6 \end{cases}$

$f(-4) =$

$f(8) =$

$f(-2) =$