

Name: _____

MVP 1.3 & 1.5 Practice

Write each absolute value function as a piece wise function.

1) $f(x) = |x + 3|$ $v(-3, 0)$
 $f(x) = \begin{cases} -(x+3) & (-\infty, -3) \\ (x+3) & [-3, \infty) \end{cases}$

2) $y = 2|x + 1|$ $v(-1, 0)$
 $y = \begin{cases} -2(x+1) & (-\infty, -1) \\ 2(x+1) & [-1, \infty) \end{cases}$

3) $y = 3|x + 4| - 1$ $v(-4, -1)$
 $y = \begin{cases} -3(x+4) - 1 & (-\infty, -4) \\ 3(x+4) - 1 & [-4, \infty) \end{cases}$

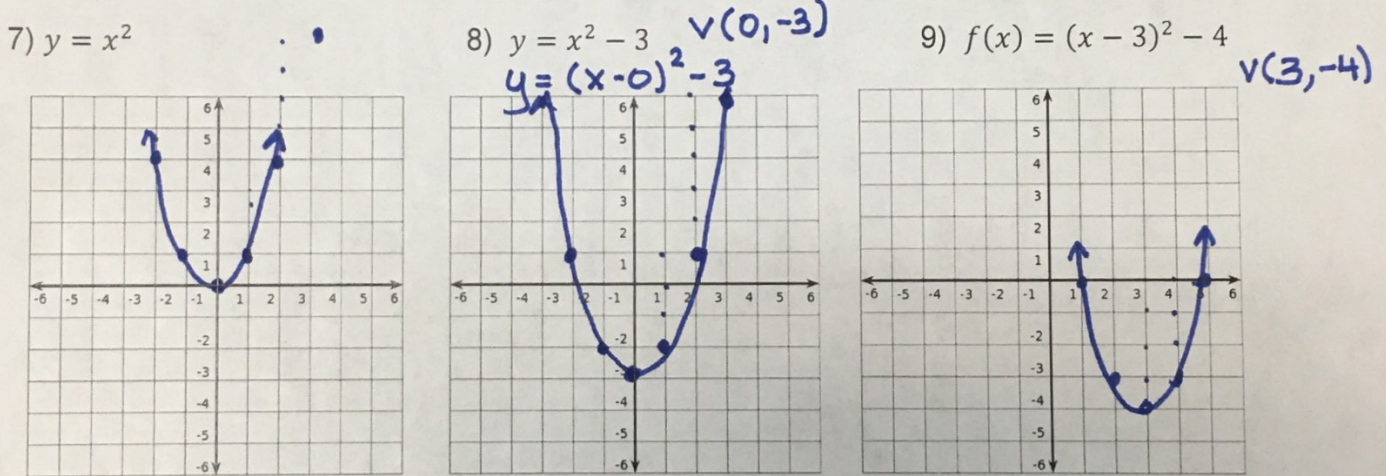
Write each piece wise function as an absolute value function:

4) $f(x) = \begin{cases} -(x-2), & x < 2 \\ (x-2), & x \geq 2 \end{cases}$
 $f(x) = |x - 2|$

5) $f(x) = \begin{cases} -2(x+3) - 1, & x < -3 \\ 2(x+3) - 1, & x \geq -3 \end{cases}$
 $f(x) = 2|x + 3| - 1$

6) $f(x) = \begin{cases} -(x) - 5, & x < 0 \\ (x) - 5, & x \geq 0 \end{cases}$
 $f(x) = |x| - 5$

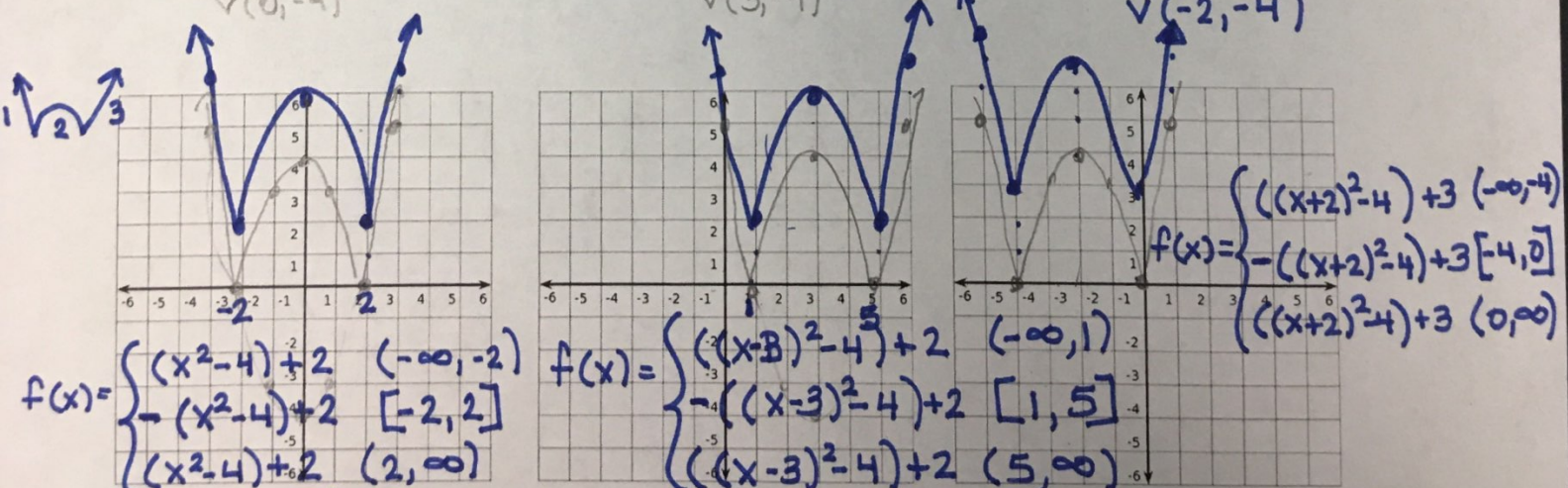
Graph each function:



10) $y = |x^2 - 4| + 2$ $v(0, -4)$

11) $y = |(x - 3)^2 - 4| + 2$ $v(3, -4)$

12) $f(x) = |(x + 2)^2 - 4| + 3$ $v(-2, -4)$



10-12 Write as piece wise