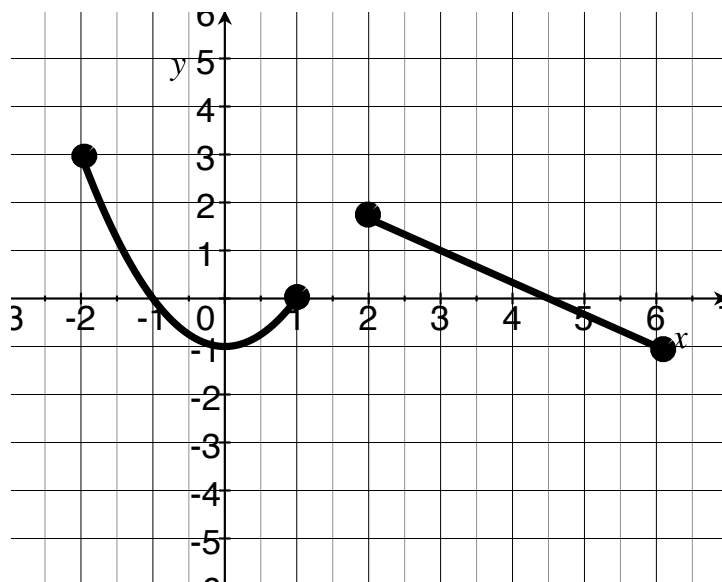


Quiz 2

Show *all* your work. No credit is given without reasonable supporting work. There are *two* sides to this quiz.

1. Let f be the piecewise function consisting of a parabola and a straight line shown in the graph to the right:



(a) [2] (§2.4 #19d) Sketch the graph of $-2f(x - 1)$

- (b) [3] (Worksheets on 10/3 #2 & 10/5 #7) Find a formula for f in the indicated form:

$$f(x) = \begin{cases} & \text{if } -2 \leq x \leq 1 \\ & \text{if } 2 \leq x \leq 6 \end{cases}$$

2. (WebHW3 #4) Let $f(x) = \frac{1}{x}$ and $g(x) = \frac{10}{x+10}$

(a) [1] Find the $(f + g)(x)$ and its domain.

(b) [2] Find $\left(\frac{f}{g}\right)(x)$ and then *simplify*.

3. (§2.7 #45) [2] Find f and g so that $(f \circ g)(x) = (x - 9)^5$ (and neither f nor g is equal to the $y = x$ function).