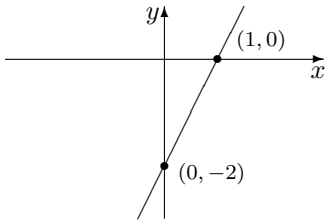
Homework 4

(due February 28)
Math 130 *Kovitz* 2020

1. In each part, sketch the graph by transforming the graph of $y = 2x - 2$, the parent function pictured here.

   Also describe the replacement in or adjustment to the equation and its effect on the graph.

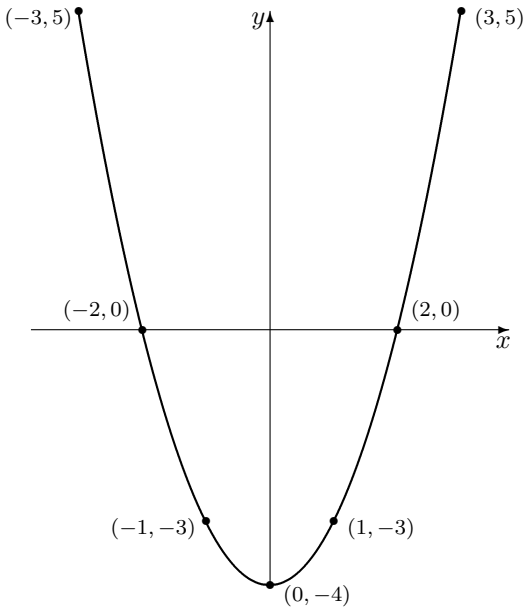
   (a) $y = 2(x + 3) - 2$
   (b) $y + 5 = 2x - 2$
   (c) $y/7 = 2x - 2$



2. In each part, sketch the graph by transforming the graph of $y = x^2 - 4$, the parent function pictured here.

   Also describe the replacement in or adjustment to the equation and its effect on the graph.

   (a) $y = (x - 5)^2 - 4$
   (b) $y = (x^2 - 4) + 1$
   (c) $y = 3(x^2 - 4)$



3. Graph, using translations and reflections. Plot all intercepts and any vertex or endpoint and label them with coordinates. Then graph any line of symmetry and label it with its equation. If there is a point of symmetry, plot it and label it as such.

   (a) $y = -\sqrt{2 + x} - 1$. Start with the parent graph of $y = \sqrt{x}$.
   (b) $y = |x - 1| - 1$. Start with the parent graph of $y = |x|$.