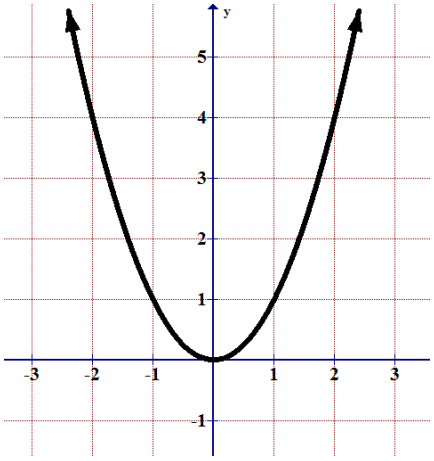
Quick review of transformations

Let's start with a parabola!!



$$y = a(x - h)^2 + k$$

vertical shift

vertical stretch / shrink

horizontal shift

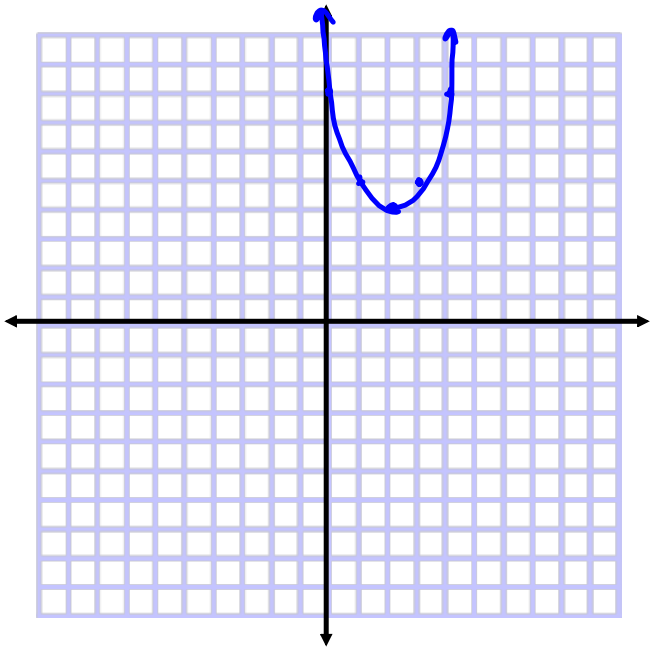
$(x-2)^2 + 4$

right 2

up 4

Graph:

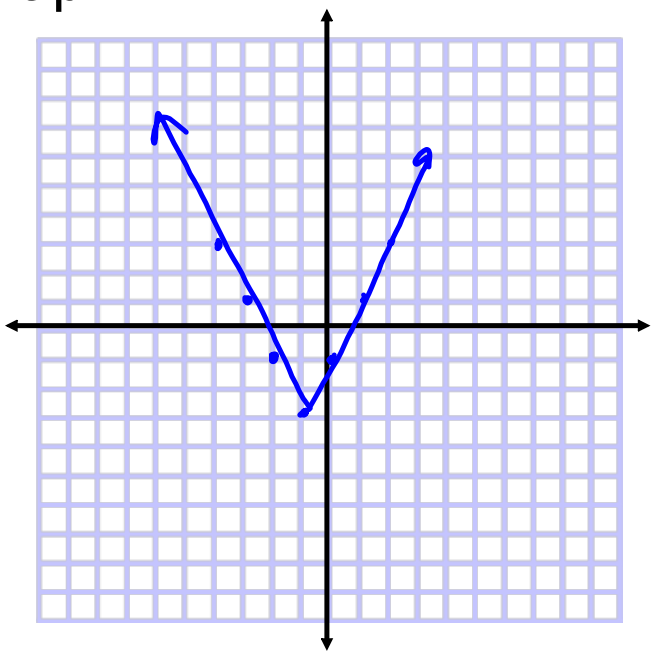
$y = (x - 2)^2 + 4$



Use the same idea to graph:

$$y = 2|x + 1| - 3$$

$(-1, -3)$



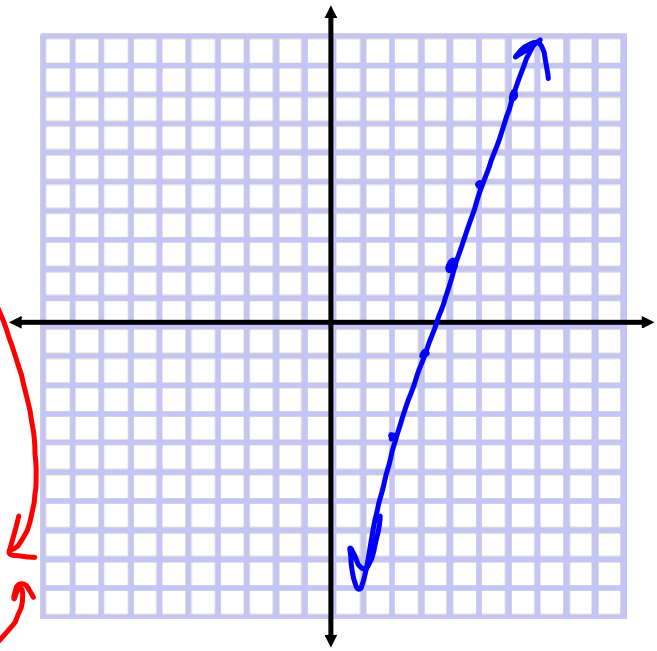
Same idea but with a line.

$y = 3(x - 4) + 2$

Sometimes referred to as

point - slope form

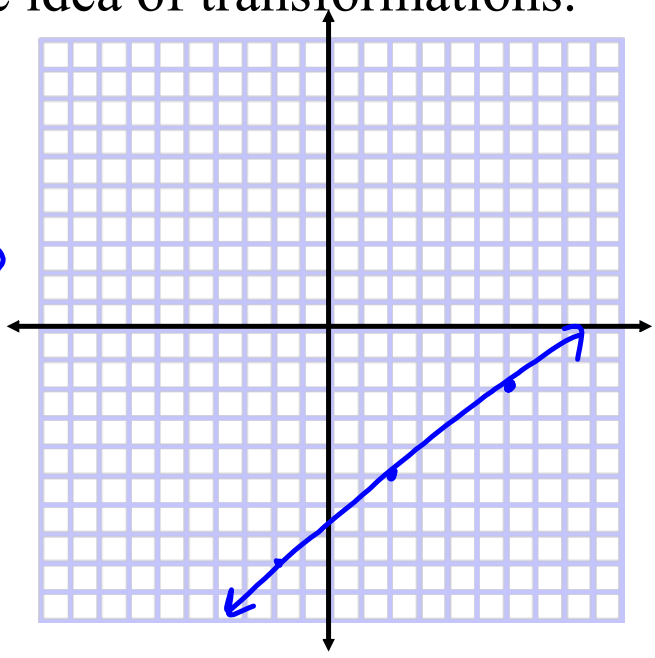
$y - y_1 = m(x - x_1)$



Graph and write the equation of the line with the given information. Use the idea of transformations. (point - slope)

(2, -5) $m = \frac{3}{4}$

$y = \frac{3}{4}(x - 2) - 5$



Write the equation for the line that passes through the given points. Use the idea of transformations.

A (5, 4) and B (-6, -3)

$\frac{4+3}{5+6} = \frac{7}{11}$

$y = \frac{7}{11}(x-5) + 4$

$y = \frac{7}{11}(x+6) - 3$