Graphing Lines in Point–Slope Form

"AFTER x_1" (this is the OPPOSITE of x_1)

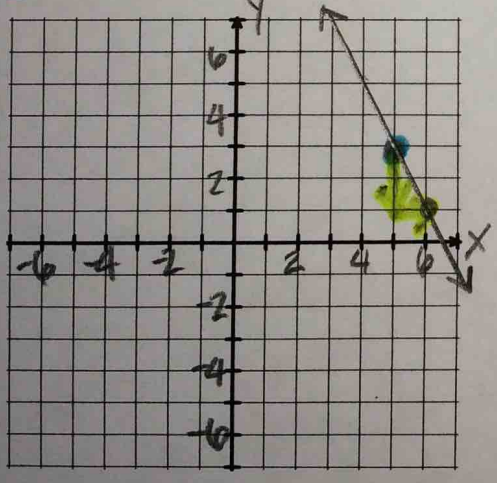
When graphing lines in point–slope, $y = m(x - x_1) + y_1$, do the following:

y_1

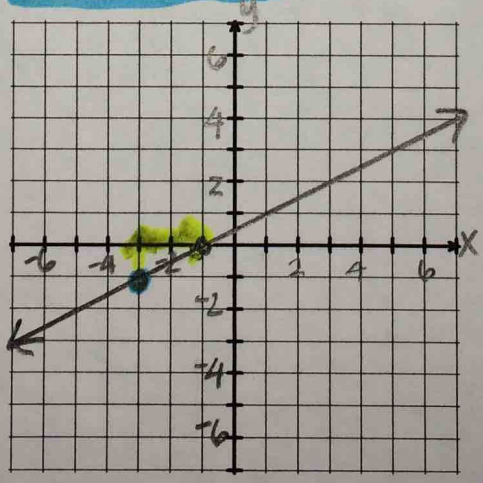
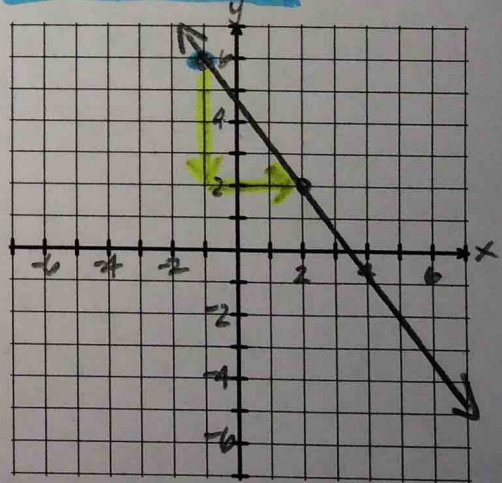
1. Identify the slope (m) and point (x_1, y_1).
This is your Justification / reasoning for the graph you are drawing.
2. Completely label the graph with scale and label the x & y axis.
3. Plot the point.
4. Use the slope to plot at least one other point.
5. Use a RULER to draw the line. Be sure to draw arrows.

Graph each line. Identify the slope and point. Completely label the graph.

1. $y - 3 = -2(x - 5)$
$+3 \quad +3$
$y = -2(x-5) + 3$
m = -2
point: $(5, 3)$



2. $y + 1 = \frac{1}{2}(x + 3)$
$y = \frac{1}{2}(x+3) - 1$
$-1 \quad -1$
m = $\frac{1}{2}$
point: $(-3, -1)$



3. $y - 6 = -\frac{4}{3}(x + 1)$
$y = -\frac{4}{3}(x+1) + 6$
$+6 \quad +6$
m = $-\frac{4}{3}$
point: $(-1, 6)$