

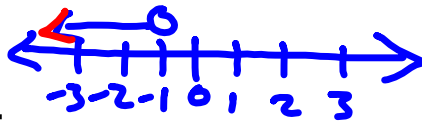
Warm Up

Graph the inequalities on a number line.

1) $x > 5$



2) $-1 > x$



3) $2x + 1 > 5$

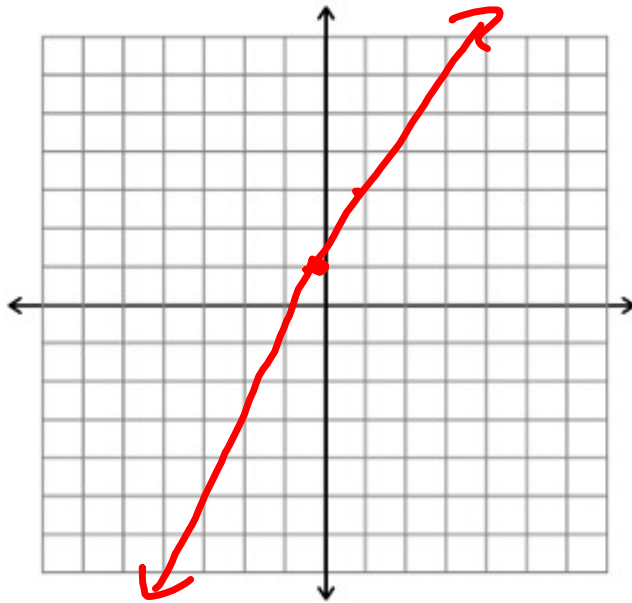
$$\begin{array}{r} 2x + 1 > 5 \\ -1 \quad -1 \\ \hline 2x > 4 \\ \underline{2x} \quad \underline{2x} \\ x > 2 \end{array}$$



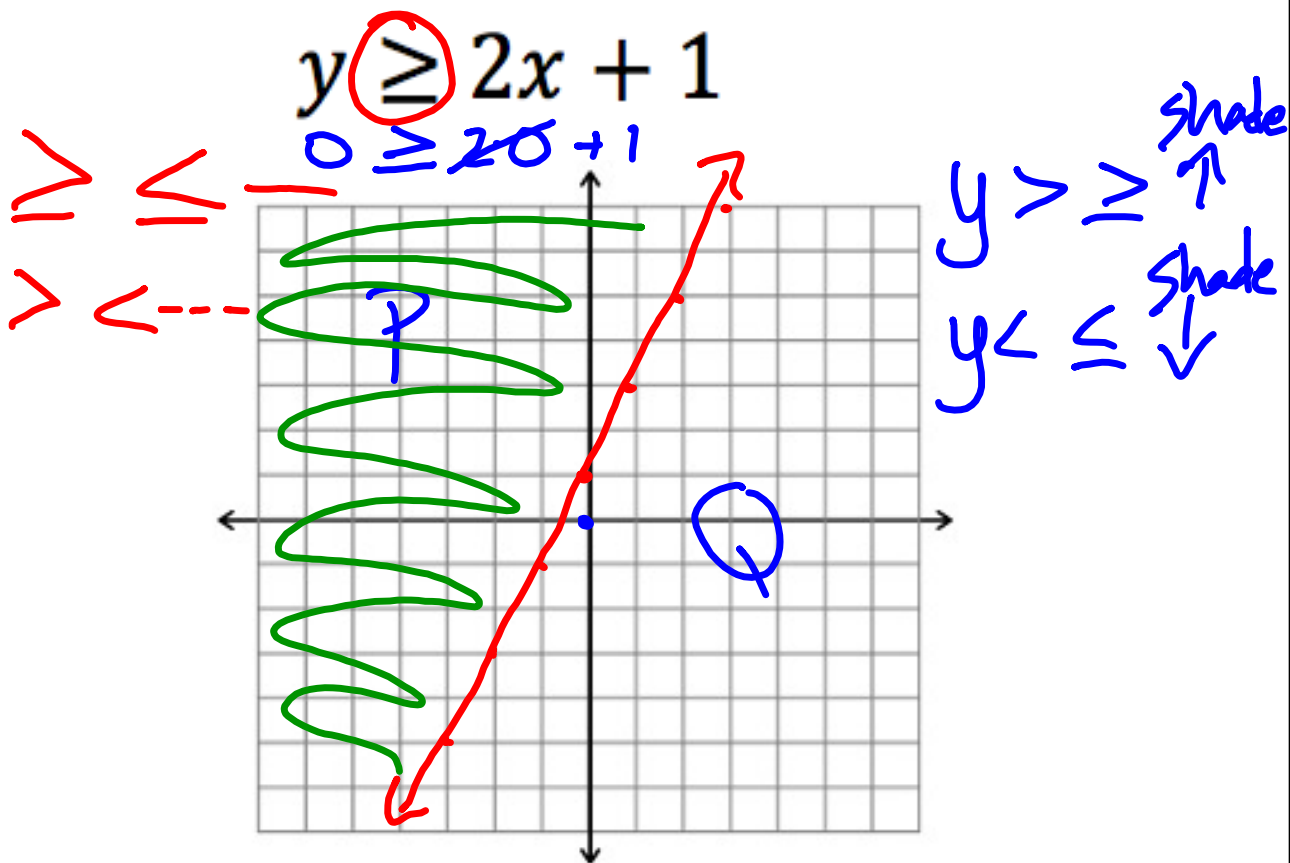
3-4 Graphing Linear Inequalities

Objective: I can graph a linear inequality on a coordinate plane

Graph $y = 2x + 1$

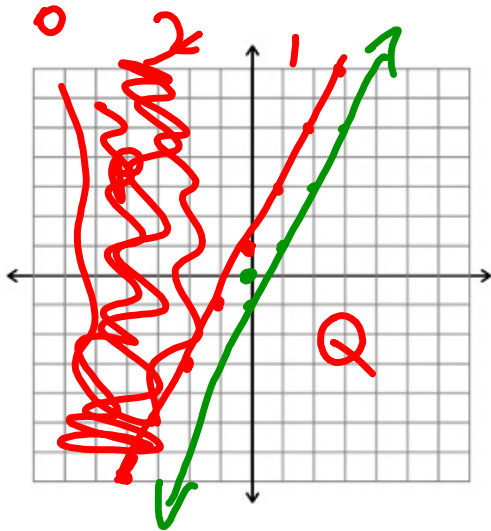


How would the graph change?

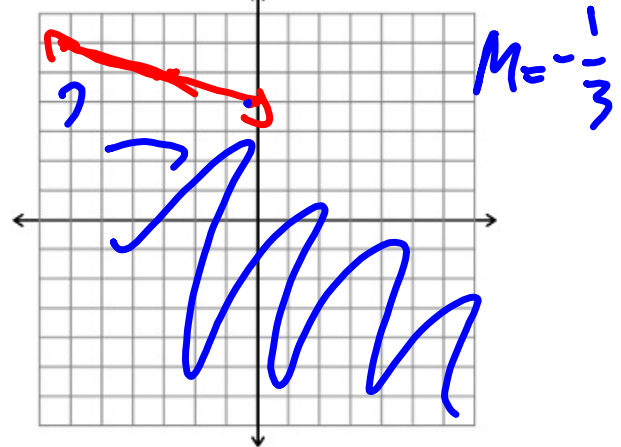


$$\begin{array}{l} \text{---} > \mathcal{V}S \geq \text{---} \\ \text{---} < \mathcal{V}S \leq \text{---} \end{array}$$

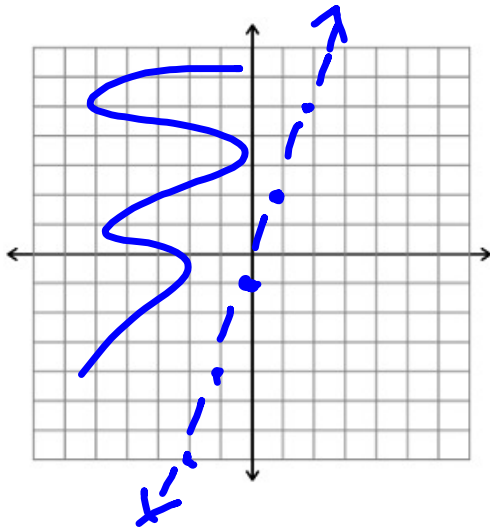
$$y \geq 2x - 1$$



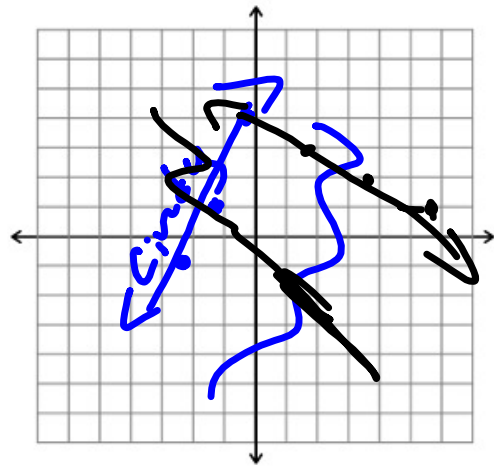
$$y \leq -\frac{1}{3}x + 4$$



$$y \geq 3x - 1$$



$$y \leq -\frac{1}{2}x + 4$$



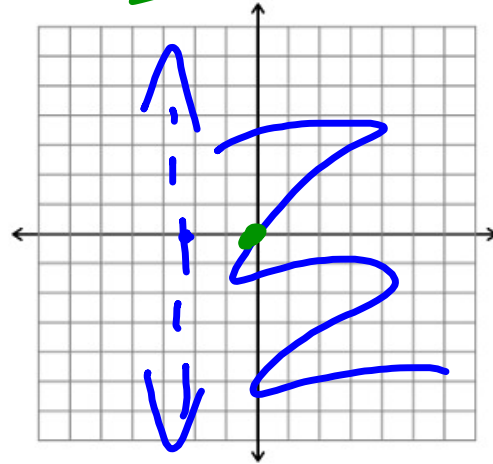
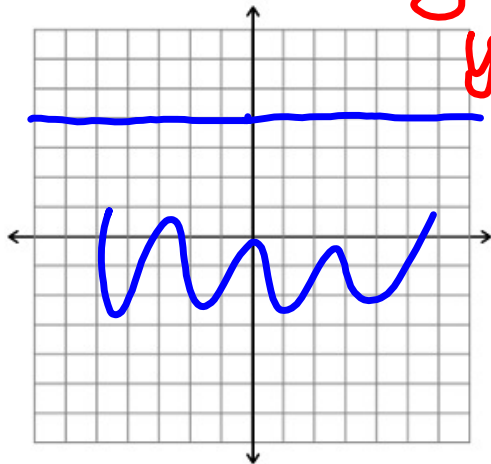
$$y \leq 4$$

$$y = mx + b$$

$$y = 0x + b$$

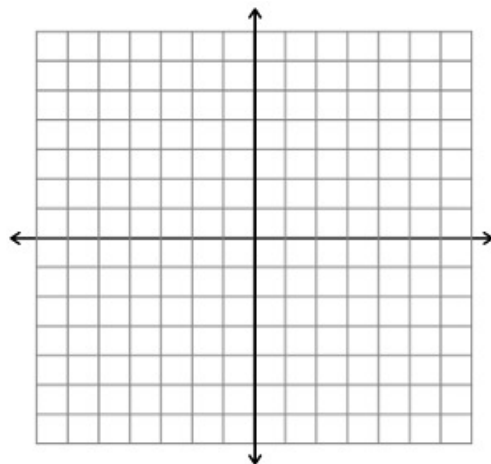
$$y = b$$

$$x > -2$$



Graph the linear inequality:

$$y < x + 3$$



Is $(-2, 4)$ a solution?

Is $(3, 1)$ a solution?

Haunted House

You borrowed \$50 from your parents to set up a super spooky haunted house. You charge a \$2 entrance fee for each person who wants to go through. How many people would need to come through the haunted house for you to pay back your parents? What if more people than that came through?

Equation:

Graph:

