

U3 Day 6 Notes: Graphing Linear Inequalities

A-REL.12: I can graph the solution of two variable linear inequality.

	Symbol	Line	Shading
y	\geq	solid	above
	\leq	solid	below
	$>$	dashed	above
	$<$	dashed	below

1. $y < \frac{3}{4}x - 3$

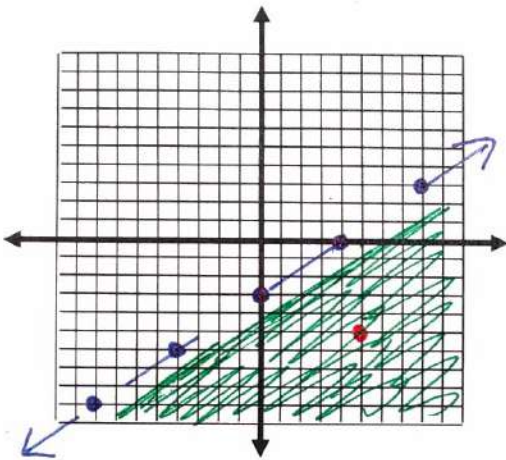
m = $\frac{3}{4}$

b = -3

Dashed or Solid

Above or Below

1 Solution of the inequality: (5, -5)



2. $y \geq -\frac{1}{3}x + 4$

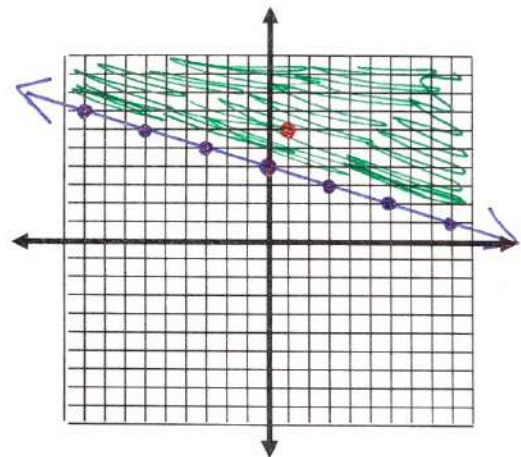
m = $-\frac{1}{3}$

b = 4

Dashed or Solid

Above or Below

1 Solution of the inequality: (1, 6)



3. $y < \frac{3}{5}x + 1$

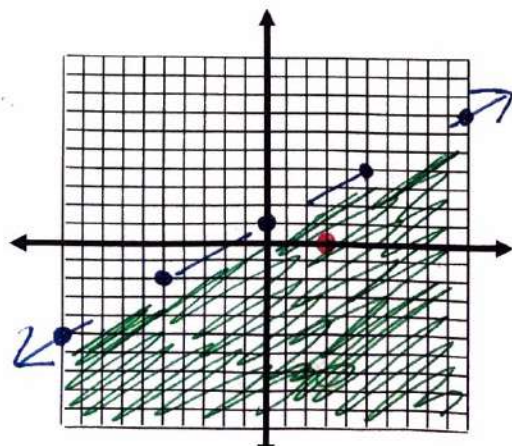
m = $\frac{3}{5}$

b = 1

Dashed or Solid

Above or Below

1 Solution of the inequality: (3, 0)



4. $y < -3 + x$

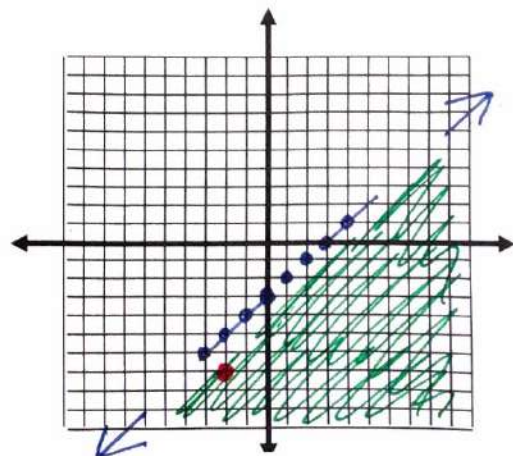
m = $\frac{1}{1}$

b = -3

Dashed or Solid

Above or Below

1 Solution of the inequality: (-2, -7)



$$5. \frac{-4x + 4y < 8}{+4x \quad +4x} \\ \frac{4y < 4x + 8}{4 \quad 4} \\ y < x + 2$$

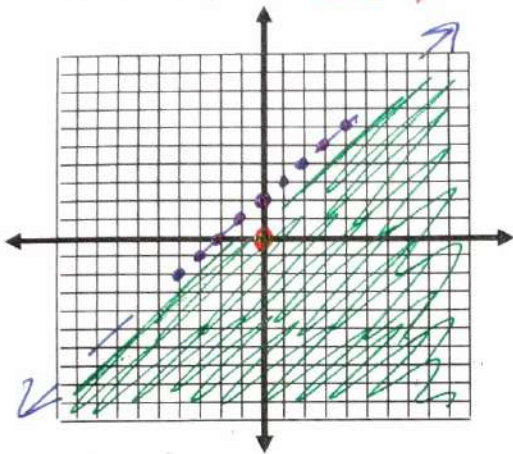
$m = \frac{1}{1}$

$b = 2$

Dashed or Solid

Above or Below

1 Solution of the inequality: $(0, 0)$



$$6. \frac{4x - 2y \geq -12}{-4x \quad -4x} \\ \frac{-2y \geq -4x - 12}{-2 \quad -2} \\ y \leq 2x + 6$$

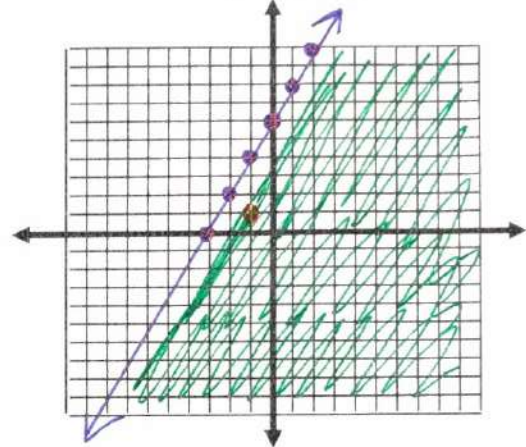
$m = \frac{2}{1}$

$b = 6$

Dashed or Solid

Above or Below

1 Solution of the inequality: $(-1, 1)$



*flip the sign when you divide by a negative!

$$7. \frac{2y + x > 6}{-x \quad -x} \\ \frac{2y > -x + 6}{2 \quad 2} \\ y > -\frac{1}{2}x + 3$$

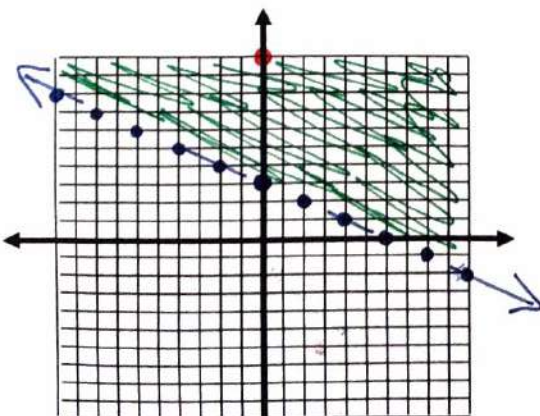
$m = -\frac{1}{2}$

$b = 3$

Dashed or Solid

Above or Below

1 Solution of the inequality: $(0, 10)$



$$8. \frac{2x + y \leq -3}{-2x \quad -2x} \\ y \leq -2x - 3$$

$m = -\frac{2}{1}$

$b = -3$

Dashed or Solid

Above or Below

1 Solution of the inequality: $(-8, 0)$

