Graphs of Linear Inequalities in Two Variables Total points = 53

Graph each inequality.

1. 2x - y > 3

 $2x - y = 3\checkmark$ Let x = 0 and y = 0: $2x - 2x - y = 3 - 2x \checkmark 2x - y > 3 \checkmark$

 $-1[-y=3-2x]\checkmark$ $2(0)-0>3\checkmark$

 $y = 2x - 3\checkmark$ 0 - 0 > 3 $m = 2\sqrt{}$

 $b = -3\checkmark$

(0,0)

(0,0)

2. $2x - 2y \ge -8$

 $2x - 2y = -8\checkmark$ Let x = 0 and y = 0:

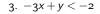
 $2x - 2x - 2y = -8 - 2x \checkmark \quad 2x - 2y \ge -8 \checkmark$

 $\frac{-2y}{-2} = \frac{-8}{-2} - \frac{2x}{-2} \checkmark$ $2(0)-2(0) \geq -8\sqrt{}$

 $y = x + 4\sqrt{}$ $o - o \ge -8$

 $m = 1\sqrt{}$ $o \ge -8$

 $b = 4\sqrt{}$



 $-3x+y=-2\checkmark$ Let x = 0 and y = 0:

 $-3x+3x+y = -2+3x\checkmark$ $-3x+y < -2\checkmark$ $-3(0)+0<-2\checkmark$ $y = 3x - 2\checkmark$

 $m = 3\sqrt{}$ $0+0 < -2\sqrt{}$

 $b = -2\sqrt{}$



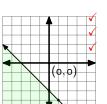
4. $x + y \le -3$

 $x+y=-3\checkmark$ Let x = 0 and y = 0:

 $x - x + y = -3 - x \checkmark \quad x + y \le -3 \checkmark$

 $0+0 \leq -3\checkmark$

 $m = -1\sqrt{}$



Total points = 53

Graph each inequality. 1. 2x - y > 3

 $2x - y = 3\checkmark$ Let x = 0 and y = 0:

Graphs of Linear Inequalities in Two Variables

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 $-1[-y=3-2x]\checkmark$ $2(0)-0>3\checkmark$

 $y = 2x - 3\checkmark$ $0 - 0 > 3\sqrt{}$

 $m = 2\sqrt{}$

 $b = -3\checkmark$



 $2x - 2y = -8\checkmark$ Let x = 0 and y = 0:

 $2x - 2x - 2y = -8 - 2x \checkmark 2x - 2y \ge -8 \checkmark$

 $\frac{-2y}{-2} = \frac{-8}{-2} - \frac{2x}{-2} \checkmark$ $2(0)-2(0) \ge -8\checkmark$



 $-3x+y=-2\checkmark$ Let x = 0 and y = 0:

-3x + 3x + y = -2 + 3x $\sqrt{}$ -3x + y < -2

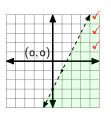


 $x+y=-3\checkmark$ Let x = 0 and y = 0:

 $x - x + y = -3 - x \checkmark \quad x + y \le -3 \checkmark$

 $0+0 \le -3\checkmark$

 $m = -1\sqrt{}$ o ≤ -3**√**



2.
$$2x - 2y \ge -8$$

 $o-o \ge -8\checkmark$ $y = x + 4\sqrt{}$

 $o \geq -8 \checkmark$ $m = 1\sqrt{}$

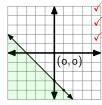


 $-3(0)+0<-2\checkmark$ $y = 3x - 2\checkmark$

 $m = 3\sqrt{}$ $0+0<-2\sqrt{ }$

0 < −2√





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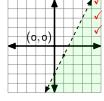
o > 3**√**

 $2x - 2x - y = 3 - 2x \checkmark 2x - y > 3 \checkmark$

 $-1[-y=3-2x]\checkmark$ $2(0) - 0 > 3\checkmark$

 $y = 2x - 3\checkmark$ $0 - 0 > 3\sqrt{}$

 $m = 2\sqrt{}$ *b* = −3√



2. $2x - 2y \ge -8$

 $2x-2y=-8\checkmark$

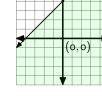
Let x = 0 and y = 0:

 $2x - 2x - 2y = -8 - 2x \checkmark \quad 2x - 2y \ge -8 \checkmark$ $\frac{-2y}{-2} = \frac{-8}{-2} - \frac{2x}{-2} \checkmark$

 $2(0)-2(0) \geq -8\checkmark$

 $0 - 0 \ge -8$ $y = x + 4\sqrt{}$

 $m = 1\sqrt{}$ $b = 4\sqrt{}$



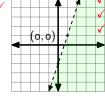
3.
$$-3x+y<-2$$

 $-3x+y=-2\checkmark$

Let x = 0 and y = 0: $-3x + 3x + y = -2 + 3x \checkmark -3x + y < -2\checkmark$

 $-3(0)+0<-2\checkmark$

 $y = 3x - 2\checkmark$ $m = 3\sqrt{}$ 0+0<-2√



4. $x + y \le -3$

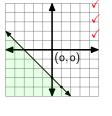
Let x = 0 and y = 0: $x+y=-3\checkmark$

 $x - x + y = -3 - x \checkmark \quad x + y \le -3 \checkmark$

 $y = -x - 3\checkmark$ $o + o \le -3\checkmark$ $m = -1\sqrt{}$

b = −3√

 $0 \le -3\sqrt{}$



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 $-1[-y=3-2x]\checkmark$ $2(0)-0>3\checkmark$ $y = 2x - 3\sqrt{}$ $0 - 0 > 3\sqrt{}$

 $m=2\sqrt{}$ o > 3**√**

 $b = -3\checkmark$

2.
$$2x - 2y \ge -8$$

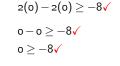
 $2x-2y=-8\checkmark$

$$2x - 2x - 2y = -8 - 2x \checkmark \quad 2x - 2y \ge -8 \checkmark$$

$$\frac{-2y}{-2} = \frac{-8}{-2} - \frac{2x}{-2} \checkmark$$

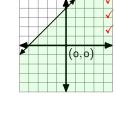
 $y = x + 4\sqrt{}$ $m = 1\sqrt{}$

 $b = 4\sqrt{}$



Let x = o and y = o: \checkmark

Let x = 0 and y = 0:



(0,0)

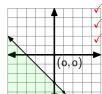


 $-3x+y=-2\checkmark$

4. $x + y \le -3$

 $-3x + 3x + y = -2 + 3x \checkmark -3x + y < -2\checkmark$ $y = 3x - 2\sqrt{}$ $-3(0)+0<-2\checkmark$





$$-3\checkmark$$
 Let $x = 0$ and $y = 0 : \checkmark$

 $x+y=-3\checkmark$ $x - x + y = -3 - x \checkmark \quad x + y \le -3 \checkmark$

 $y = -x - 3\checkmark$ $o + o \le -3\checkmark$ $m = -1\sqrt{}$ $0 \le -3\checkmark$

 $b = -3\checkmark$

