2.5

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

Forms of lines

$y = mx + b$ slope-int. form

($Ax + By = C$ Standard form)

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

point slope form

1) A. $(1,-3)\ (-5,7)$

$-\frac{5}{3}$

B) $\perp$ to $y = -\frac{5}{1}x + 6$ $\quad m_{\perp} = +\frac{1}{5}$

C) $\parallel$ $y = -5x + 6$ $\quad m_{\parallel} = -5$

(2)

a) $m = -\frac{1}{3}$, $(9, 1)$

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

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

$y - 1 = -\frac{1}{3}(x - 9)$

$y - 1 = -\frac{1}{3}x + 3$

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

$3 \cdot \frac{1}{3}x + 3y = 3 \cdot 4$

$x + 3y = 12$

b) $\parallel$ to $y = 2x - 3$ $\quad m = 2$

$(5, 8)$

$y - 8 = 2(x - 5)$

$y - 8 = 2x - 10$

$y = 2x - 2$

c) $(-5, 6)$ $(-3, 2)$

$$m = \frac{6-2}{-5+3} = \frac{4}{-2} = -2$$

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

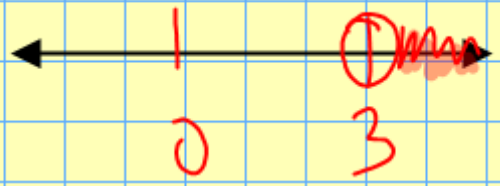
$$y - 2 = -2x - 6$$

$$\boxed{y = -2x - 4}$$

old

1-D

$\{x|x>3\}$

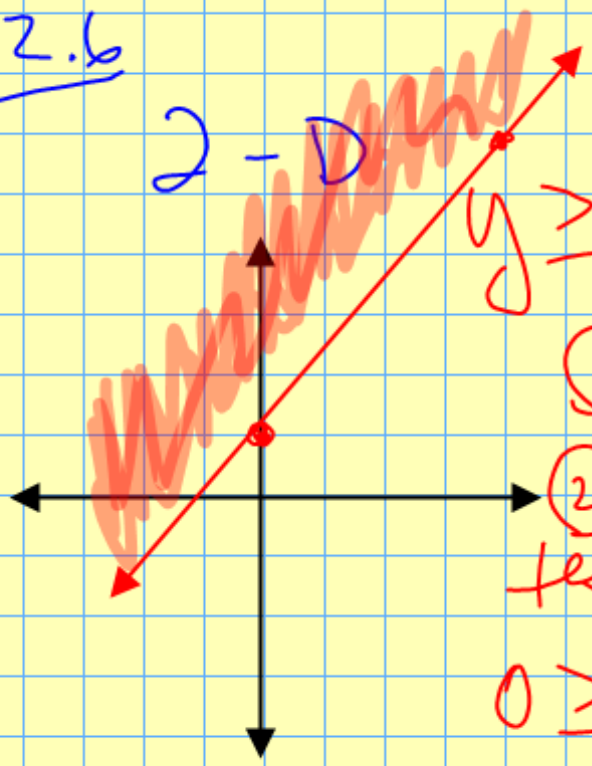


Int. not $(3,\infty)$

vs

2.6

2-D



$y \geq 5x+1$

① $y=5x+1$

② test $(0,0)$

$0 \geq 0+1$

$0 \geq 1$

F

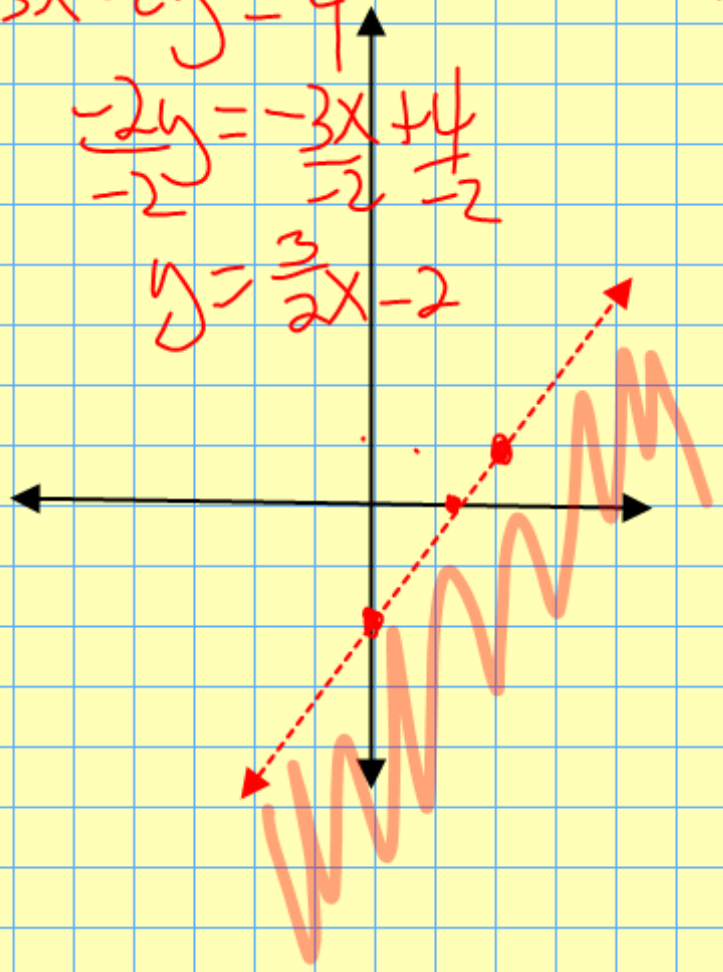
NO

Interval notation

$3x-2y=4$

$\frac{-2y}{-2}=\frac{-3x}{-2}+\frac{4}{-2}$

$y=\frac{3}{2}x-2$



Test

$3x-2y>4$

① $3x-2y=4$

x	y
0	-2
4/3	0

$-2y=4$

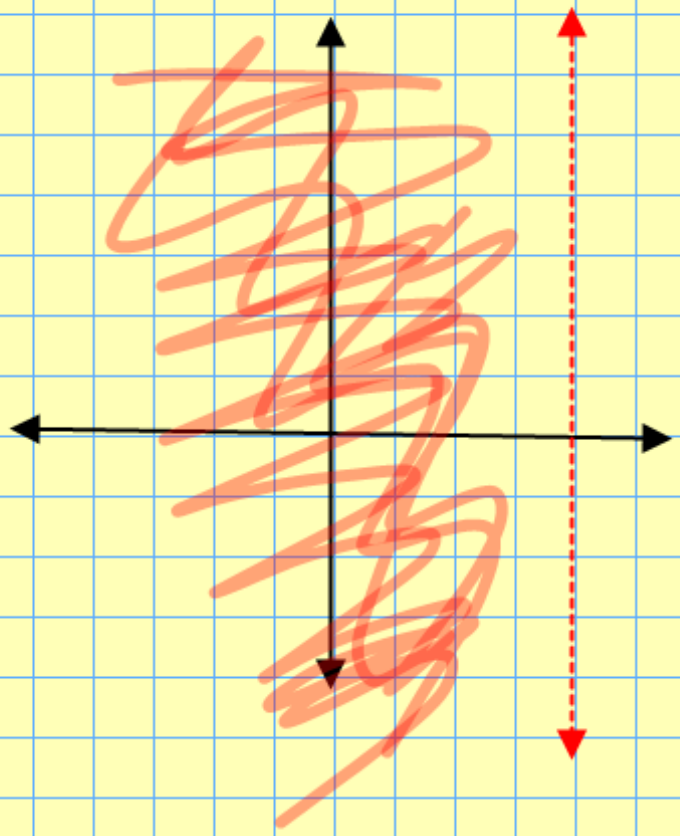
$\frac{3x}{3}=\frac{4}{3}$

② test (0,0)

$0+0>4$

$0>4$ F

$x < 4$



1

$x = 4$

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2.6 Linear Inequalities in Two Variables

Overview

Objective: Graph a linear inequality in two variables.

1 2 3 4 5 6 7 8 9 10

2.6.6

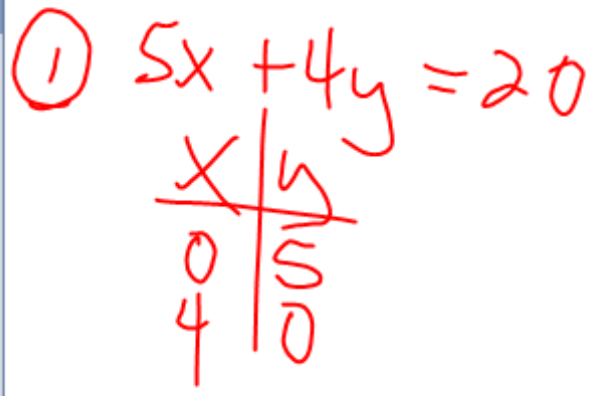
2 correct | 0 of 14 complete

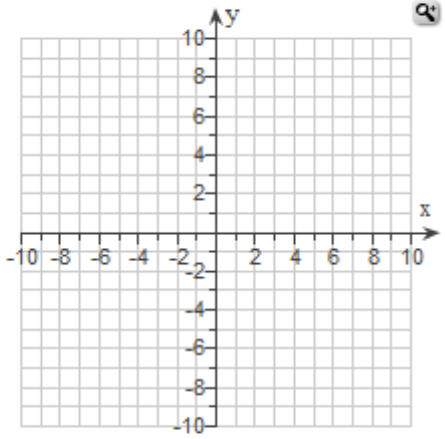
Graph the inequality.

$5x + 4y > 20$

Use the graphing tool on the right to graph the inequality.

Click to enlarge graph





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To pop up your graph, click the Click to enlarge graph button.

All parts showing

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2.6 Linear Inequalities in Two Variables

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1 2 3 4 5

2.6.6

0 of 14 complete

Graph the inequality.

$5x + 4y > 20$

Use the graphing tool on the

Click to enlarge graph

test

(0,0)

0+0 > 20

F

Normal Medium Maximize

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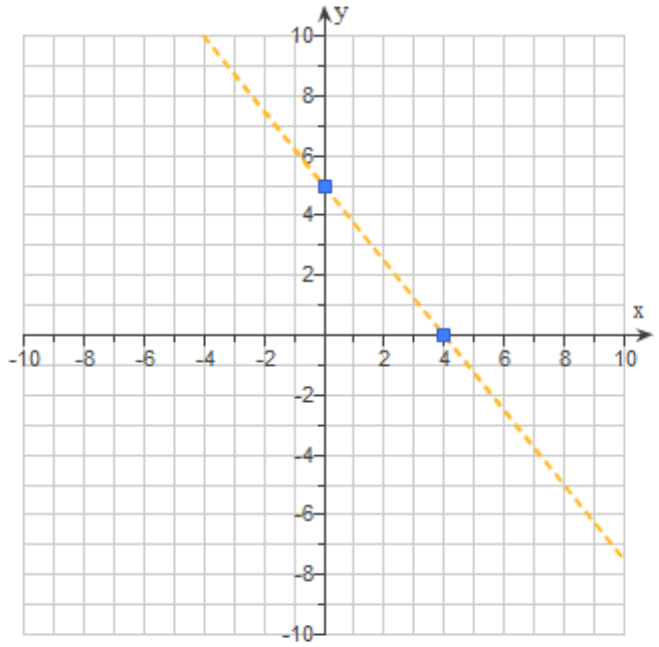

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2.6 Linear Inequalities in Two Variables

Overview

Objective: Graph a linear inequality in two variables.

1 2 3 4 5 6 7 8 9 10

2.6.8

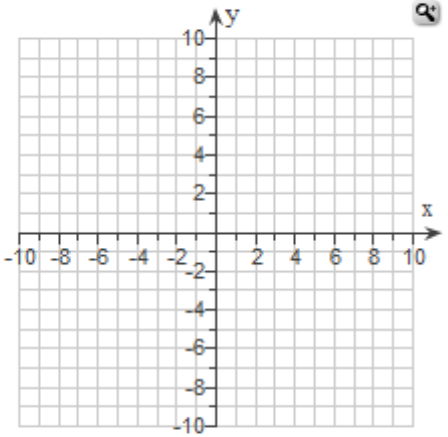
3 correct | 1 of 14 complete

Graph the following linear inequality.

$-5x + 6y \leq 0$

Use the graphing tool to graph the inequality.

Click to enlarge graph



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$-5x+6y \leq 0$

① $\frac{6y}{6} = \frac{5x}{6}$

$y = \frac{5}{6}x + 0$

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2.6 Linear Inequalities in Two Variables

Overview

Objective: Graph a linear inequality in two variables.

2.6.8

14 complete

Graph the following linear inequa

$-5x + 6y \leq 0$

Use the graphing tool to graph th

Click to enlarge graph

$-5x+6y \leq 0$

$-20+0 \leq 0$

$-20 \leq 0$

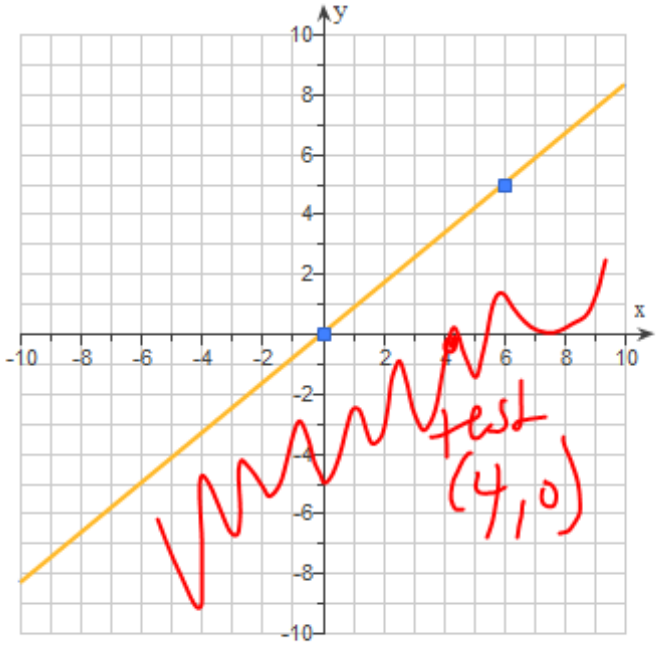
T

To pop up your graph, click the Cli

All parts showing

Normal Medium Maximize

An object is selected. Delete it, or move it with keyboard arrow keys or by dragging.



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② $h(7) = 2(7) + 5 = 19$

③

Domain $(-\infty, \infty)$
Range $(-\infty, \infty)$

Domain $[-4, 5]$
Range $[-5, 4]$