2.5

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

$y - y_1 = m(x - x_1)$ point-slope form

$y = mx + b$ slope-intercept Form

$Ax + By = C$ Standard Form

1 (A) $-\frac{5}{3}$

(B) $y = -5x + 6$

$m_{\perp} = +\frac{1}{5}$

(C) $\parallel \rightarrow m_{\parallel} = -5$

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

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

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

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

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

$x + 3y = 12$

2 b) $\parallel$ to $y = 2x - 3$ $(5, 8)$

$m = 2$

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

$y - 8 = 2x - 10$

$y = 2x - 2$

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

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

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

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

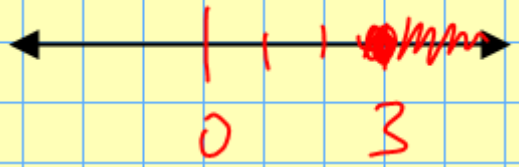
$$\boxed{y = -2x - 4}$$

old

1-D

$\{x \mid x \geq 3\}$

$x = 3$



interval notation $[3, \infty)$

$x > 3$ $(3, \infty)$

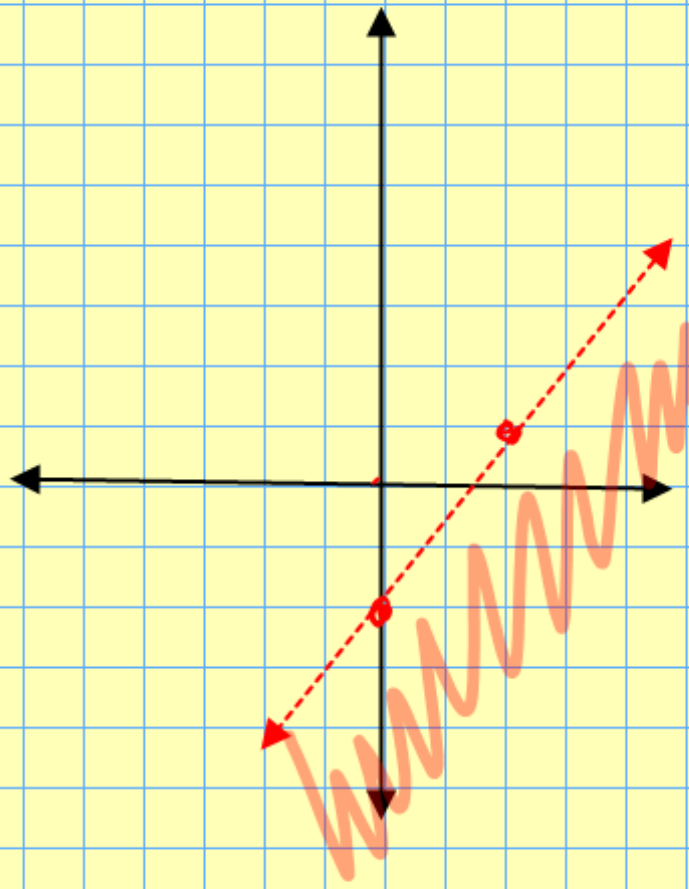
2.6

2-D

no = interval notation

$y \geq \frac{5}{4}x + 1$

1. $y = \frac{5}{4}x + 1$
2. test 0,0 $0 \geq 0 + 1$ F



$3x - 2y > 4$

① $3x - 2y = 4$

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

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

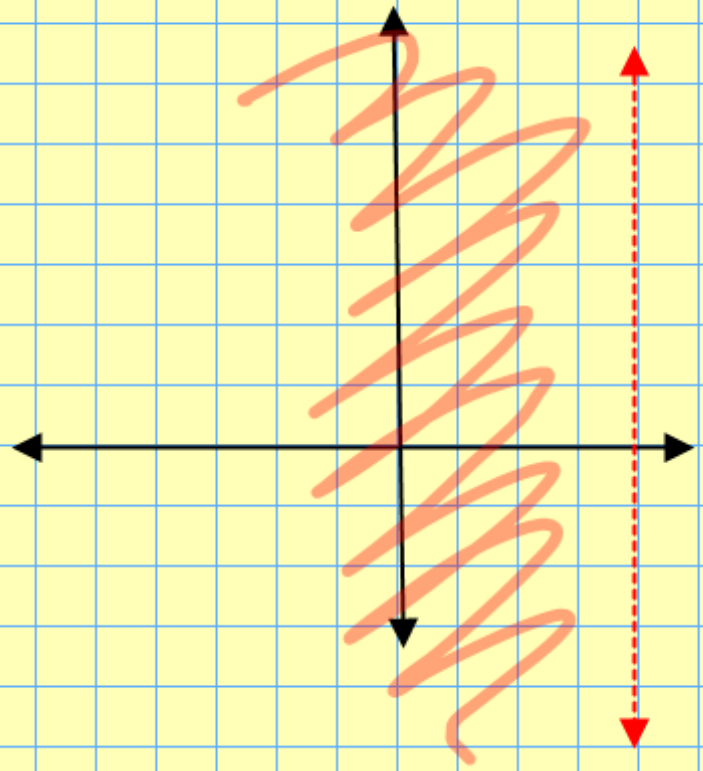
② test $(0,0)$

$0 - 0 > 4$

F

b) $x < 4$

a) $x = 4$



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2.6 Linear Inequalities in Two Variables

Overview

Objective: Graph a linear inequality in two variables.

11 12 13 14

2.6.11

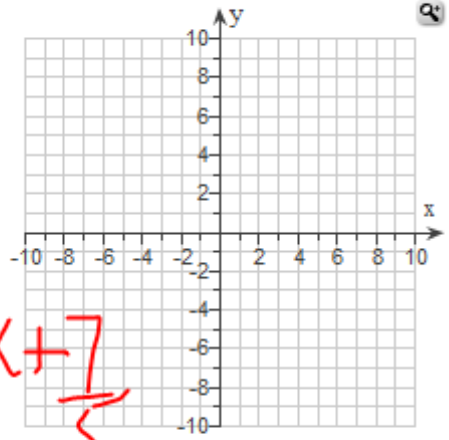
4 correct | 0 of 14 complete

Graph the following inequality.

$$\frac{2}{5}x + \frac{1}{2}y > \frac{7}{10}$$

Use the graphing tool to graph the inequality.

Click to enlarge graph



Delete ? Clear

$5y = -4x + 7$

$\frac{5y}{5} = \frac{-4x}{5} + \frac{7}{5}$

$4x + 5y > 7$

$4x + 5y = 7$

$y = -\frac{4}{5}x + \frac{7}{5}$

Help Me Solve This

View an Example

Video

Textbook

Calculator

Ask My Instructor

Print

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

All parts showing

Clear All | Check Answer | Close

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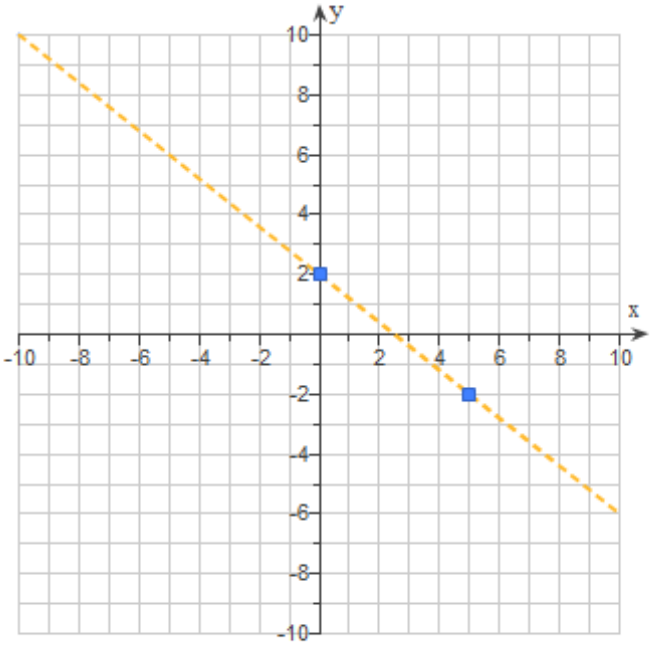
Click to enlarge graph

Normal Medium Maximize

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



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Cancel Save

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Calculator

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More

To pop up your graph, click the Cli

All parts showing

Close

javascript:goOverview()

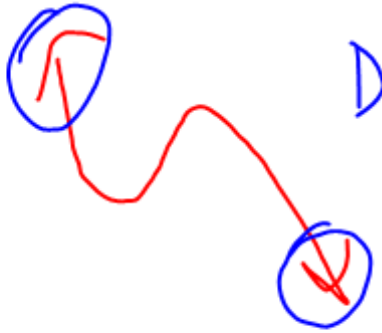
$$f(-2) = 2(-2)^2 - 3(-2) + 1$$

$$= 8 + 6 + 1$$

$$= 15$$

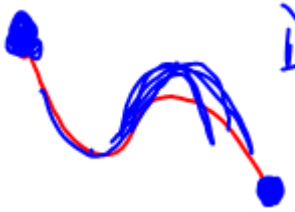
$$h(7) = 19$$

3



Domain $(-\infty, \infty)$

Range $(-\infty, \infty)$



Domain $[-4, 5]$

Range $[-5, 4]$