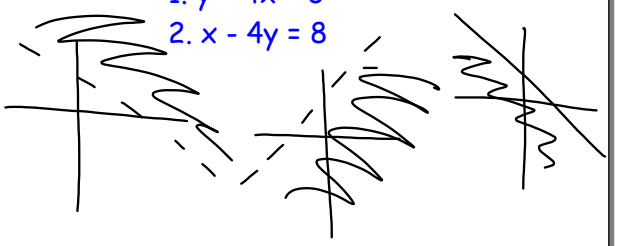
Graph each line.

1. $y = 4x + 3$
2. $x - 4y = 8$



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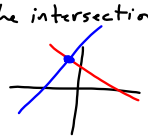
Graphing - Find the intersection of the lines.



Matrix - An array of numbers

	T	P	TD	yrds
Andrew				
Matthew				

Elimination - solve equation by getting rid of a variable.

Substitution - solve by replacing a variable with values.

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Consistent - equations have at least one solution.

Inconsistent - no solutions

Dependent - infinite number of solutions

Independent - exactly one solution

Feasible region - Possible area

Bounded region - small area that makes all graph true.

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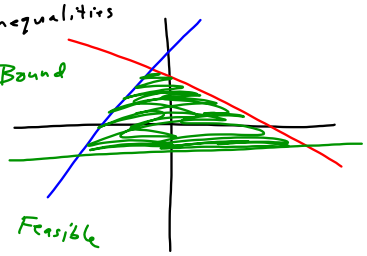
Inequalities

Bound



Feasible

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

$y = -3x - 2$

$m = -3$

$6x + 2y = 10$
$-6x \quad -6x$

$\frac{2y}{2} = \frac{-6x}{2} + \frac{10}{2}$

$y = -3x + 5$

$m = -3$

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$x + 2y = 5$
$-x \quad -x$

$\frac{2y}{2} = \frac{-x}{2} + \frac{5}{2}$

$y = \left(-\frac{x}{2}\right) + \left(\frac{5}{2}\right)$

$\frac{3x}{-6} - \frac{15}{-6} = \frac{-6y}{-6}$

$y = \left(-\frac{x}{2}\right) + \left(\frac{5}{2}\right)$

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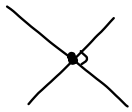
$2x - y = 3$
$-2x \quad -2x$
$-y = -2x + 3$
$y = 2x - 3$
$m = 2$

$x + 2y = 4$
$-x \quad -x$
$\frac{2y}{2} = \frac{-x}{2} + \frac{4}{2}$
$y = \left(-\frac{x}{2}\right) + 2$
$m = -\frac{1}{2}$

Perpendicular



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$3x - 7y = -6$
$-3x \quad -3x$
$\frac{-7y}{-7} = \frac{-3x}{-7} - \frac{6}{-7}$
$y = \left(\frac{3}{7}\right)x + \frac{6}{7}$

$x + 2y = 11$
$-x \quad -x$
$\frac{2y}{2} = \frac{-x}{2} + \frac{11}{2}$
$y = \frac{-x}{2} + 5.5$

(,)

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$3x - y = 2$
$-3x \quad -3x$
$\frac{-y}{-1} = \frac{-3x}{-1} + \frac{2}{-1}$
$\boxed{y = 3x - 2}$
$y > 3x - 2$

$x + y = 6$
$-x \quad -x$
$\boxed{y = -x + 6}$
$y < -x + 6$

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Greater than $>$

less than $<$

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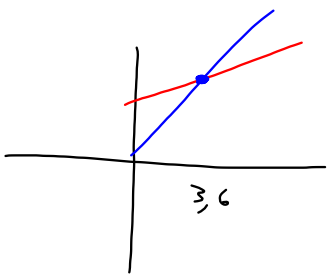
3.3 Graph Inequalities

$x - y \le 2$
$-x \quad -x$
$\frac{-y}{-1} \le \frac{-x}{-1} + \frac{2}{-1}$
$y \ge x - 2$

$x + 2y \ge 1$
$-x \quad -x$
$\frac{2y}{2} \ge \frac{-x}{2} + \frac{1}{2}$
$y \ge -\frac{x}{2} + \frac{1}{2}$

Oct 23-12:02 PM



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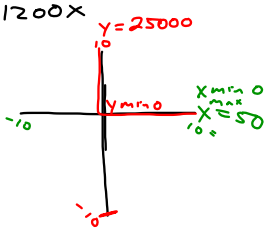
A $y = 13{,}000 + 500x$

B $y = 2500 + 1200x$

Xmin -10
Xmax 10



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