

# Algebra I

## 7-Review

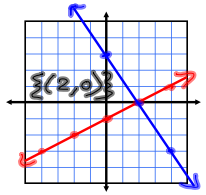
(Mixed Practice)

### Solving Systems: Choose your Method

#### Review of the Graphing Method

$$*1) \quad y = \frac{1}{2}x - 1$$
$$m = \frac{1}{2}$$
$$b = -1$$

$$3x + 2y = 6$$
$$3x + 2y = -3 + 6$$
$$2y = -3x + 6$$
$$y = -\frac{3}{2}x + 3$$
$$m = -\frac{3}{2} \quad b = 3$$



What are the problems associated with the Graphing Method?

Don't always cross on the graph or on a nice point.

Slow, lots of work

When is it advisable to use the Graphing Method?

Both are in  $y = mx + b$  for  $m$

#### Review of the Substitution Method

$$*2) \quad y = 2x + 1 \quad x + 2y = -8$$
$$y = 2(-2) + 1 \quad x + 2(2x + 1) = -8$$
$$y = -4 + 1 \quad x + 4x + 2 = -8$$
$$y = -3 \quad 5x + 2 = -8 - 2$$
$$5x = -10 \quad x = -2$$
$$\{(-2, -3)\}$$

What are the problems associated with the Substitution Method?

Slow if one letter is not on a side by itself.

Numbers are often hard to work with.

When is it a good idea to use the Substitution Method?

A letter is on a side by itself.

#### Review of the Linear Transformation Method

$$*3) \quad 2x + y = 5$$
$$x - y = 4$$
$$(3) -y = 4$$
$$y = -1$$
$$3 - 3 - y = 4 - 3$$
$$-y = 1$$
$$y = -1$$
$$\frac{3x}{3} = \frac{9}{3}$$
$$x = 3$$
$$\{(3, -1)\}$$

When should I use the Linear Transformation Method?

Almost always

pg 433 (Handout)

1, 3 → Graph

4, 6 → Substitution

7, 9 → Linear Transformation

10-26 even → Your Choice