Algebra I

9-5

(Mixed Practice)

Solving Systems: Choose your Method

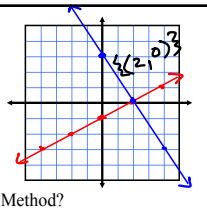
Review of the Graphing Method

*1) $y = \frac{1}{2}x - 1$ $\quad 3x + 2y = 6$

$m = \frac{1}{2}$ $\quad 3x - 3x + 2y = -3x + 6$

$b = (0, -1)$ $\quad \frac{2y}{2} = \frac{-3x}{2} + \frac{6}{2}$

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



What are the problems associated with the Graphing Method?

might cross off the graph,
might not cross at a nice point,
Slow and inaccurate.

When is it advisable to use the Graphing Method?

almost never. MAYBE if both are in y=mx+b form.

Review of the Substitution Method.

*2) $y = 2x + 1$ $\quad x + 2y = -8$

$x + 2(2x+1) = -8$

$x + 4x + 2 = -8$

$5x + 2 - 2 = -8 - 2$

$\frac{5x}{5} = \frac{-10}{5}$ $\quad x = -2$

$y = 2(-2) + 1$

$= -4 + 1$

$= -3$

$\{(-2, -3)\}$

What are the problems associated with the Substitution Method?

A letter isn't always by itself.
Fractions can get nasty
Better than graphing, but still slow.

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

If a letter is by itself, might be fastest.

Review of the Linear Transformation Method.

*3) $2x + y = 5$

$+ \quad x - y = 4$

$3x = 9$

$x = 3$

$2(3) + y = 5$

$6 + y = 5$

$y = -1$

$\{(3, -1)\}$

When should I use the Linear Transformation Method?

Almost always.

Pg 433

1,3 → Graph
4,6 → Substitution
7,9 → Linear Transformation
10,12 → Your Choice