BE-1A WEDNESDAY 11-29-06

Combine like terms:

① $4x + 3 - 2x + 6$

② $6a - 8a + 9a - 12$

③ $4(6x - 5) + 10x + 6$

TAKE OUT HOMEWORK FROM LAST NIGHT ⇒ Pg 146 # 24-32

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④ $\frac{1}{3}(9x - 18)$

Do you notice anything different about this equation?

$$20x + 5 = 5x + 65$$

LOOK! There are variables on BOTH SIDES of the equation.

WHAT DO YOU DO?

Ch. 3-5 "Solving Equations With The Variable on EACH SIDE."

Combine like terms first, follows the G.R.E.!

Ex)

$$20x + 5 = 5x + 65$$
$$-5x \qquad -5x$$
$$15x + 5 = 65$$
$$-5 \qquad -5$$
$$\frac{15x}{15} = \frac{60}{15}$$

$$\boxed{x = 4}$$

$$20x + 5 = 5x + 65$$
$$-20x \qquad -20x$$
$$5 = -15x + 65$$
$$-65 \qquad -65$$
$$-60 = -15x$$
$$\frac{-60}{-15} = x$$

$$\boxed{4 = x}$$

USUALLY BEST TO KEEP VARIABLES POSITIVE

Ex 1 Pg 149

$$-2+10p = 8p-1$$
$$-8p \quad -8p$$
$$-2+2p = -1$$
$$+2 \qquad +2$$
$$\frac{2p}{2} = \frac{1}{2}$$
$$\boxed{p = \tfrac{1}{2}}$$

CK $-2+10(\frac{1}{2}) \stackrel{?}{=} 8(\frac{1}{2})-1$

$-2+5 \stackrel{?}{=} 4-1$ ✓

WHAT IF YOU DO EVERYTHING RIGHT AND YOUR VARIABLE "disappears"?

Ex) $3x + 2 = 3x - 6$

$-3x \qquad -3x$

$\boxed{2 = -6}$ ⇒ FALSE

Ex) $5x - 4 = 5x - 4$

$-5x \qquad -5x$

$\boxed{-4 = -4}$ ⇒ TRUE

SPECIAL CASES

FALSE ⇒ NO SOLUTION

TRUE ⇒ SOLUTION IS "ALL REAL NUMBERS" (CALLED AN <u>identity</u> EQUATION)

Practice ⇒ Pg 152 # 5 to 8

Homework ⇒ Pg 152 # 16-23