4.1b / 4.1.2 $ax+b=cx$ & $ax+b=cx+d$

Note Title 11/8/2017

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LIKE TERMS = TERMS WITH THE SAME VARIABLE & EXPONENT.

Ex) $x, 2x, -5x, -\frac{x}{4}$ } LIKE TERMS

$-\frac{2}{3}, 0, 5$ } LIKE TERMS

$4xy^2, -2xy^2, -xy^2, 3y^2x$ } LIKE TERMS

STEPS:

1. COMBINE LIKE TERMS ("CLEAN IT UP")
2. FIND THE VARIABLE(S)
3. MOVE THE VARIABLES TO ONE SIDE

USING INVERSE OPERATIONS

HINT: MOVE THE SMALLER VALUE TO AVOID (-)

4. GET THE VARIABLE "ALONE" BY REMOVING THE CONSTANT & THEN THE COEFFICIENT.

Ex. 1) $-2x + 5x - 8 = -2$

$3x - 8 = -2$

$+8 \quad +8$

$\frac{3x}{3} = \frac{6}{3}$

$x = 2$

Ex. 2) $4n + 2 = 7n - 10$

$-4n \quad -4n$

$2 = 3n - 10$

$+10 \quad +10$

$$\frac{12}{3} = \frac{3n}{3}$$

$$4 = n$$

Ex.3) $8 - 2x - 3 = 5x + 7 - 1x$

- COMBINE LIKE TERMS

$$-2x + 5 = 4x + 7$$
$$+2x \quad\quad +2x$$

- MOVE VARIABLES TO ONE SIDE

$$5 = 6x + 7$$
$$-7 \quad\quad -7$$

- REMOVE CONSTANT

$$-2 = 6x$$

- REMOVE COEFFICIENT

$$\frac{-2}{6} = \frac{6x}{6}$$

• REDUCE

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

4) $2x - 5 - 3x = 5x - 10 - 2x$

• combine like terms

$-1x - 5 = 3x - 10$

$+1x \quad\quad +1x$

• move variable to one side

$-5 = 4x - 10$

$+10 \quad\quad +10$

• remove constant

$\frac{5}{4} = \frac{4x}{4}$

• remove coefficient

$$\frac{5}{4} = x$$

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#1-8 NOVICE

#1-16 APPRENTICE

#1-15 ODDS, 17-22 EXPERTS.