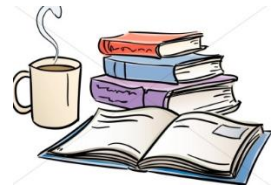


Key

Solving Equations: Special Cases Edition



Warm Up:

a. $3 - 6(x - 5) = 5x$

$$3 - 6x + 30 = 5x$$

$$-6x + 33 = 5x$$

$$33 = 11x$$

$$x = 3$$

b. $3x + 8 - 5x = 14 - 5x$

$$-2x + 8 = 14 - 5x$$

$$3x = 6$$

$$x = 2$$

Two more.....hmmmm:

a. $5(z - 8) = -40 + 5z$

$$5z - 40 = -40 + 5z$$

$$-40 = -40$$

b. $2x + 7 = 9 - 2x$

$$+2x \quad +2x$$

$$7 = 9$$

Sooo... Let's Summarize:

If we end up with a true statement then our answer is all real numbers \mathbb{R}

And if we end up with a false statement then we have no solution

A few practice problems:

1) $2(k - 1) = -\frac{1}{2}(-4k + 4)$

$$2k - 2 = 2k - 2$$

 \mathbb{R}

2) $5(1 + 4s) = 2(3 + 10s)$

$$5 + 20s = 6 + 20s$$

$$5 = 6$$

NO SOLUTION

3) $\frac{x}{2} - 5 = -7 + 2$

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

$$\frac{x}{2} = 0$$

$$x = 0$$

4) $10 - 2x - 8 = 8 - 4x$

$$2 - 2x = 8 - 4x$$

$$2 + 2x = 8$$

$$2x = 6$$

$$x = 3$$