SOLVING EQUATIONS

Solve for x.

$$5(4-2x) = x - 3(2x-1)$$
$$20-10x = x - 6x + 3$$
$$20-10x = -5x + 3$$
$$-3 + 10x \quad +10x - 3$$
$$\frac{17}{5} = \frac{5x}{5}$$

$$\frac{10}{4}$$

$$\boxed{\frac{17}{5} = x}$$

$$0 = 7$$
No sol.

$$2x + 3 = 2x + 3$$
$$-2x - 3 - 2x - 3$$
$$0x = 0$$
$$\mathbb{R}$$

Multiply by the common denominator to eliminate all fractions!

$$15\left[\frac{4}{3}x - 2 = \frac{2}{5}(x+4) + 1\right]15$$

$$20x - 30 = 6(x+4) + 15$$
$$20x - 30 = 6x + 24 + 15$$
$$20x - 30 = 6x + 39$$
$$-6x \quad +30 \quad -6x \quad +30$$

$$\frac{14x}{14} = \frac{69}{14}$$
$$\boxed{x = \frac{69}{14}}$$

Solving Equations:

1) Get rid of fractions! Multiply EVERY term by the common denominator!

2) Combine like terms.

3) Move terms that are added/subtracted.

4) Multiple/Divide by coefficient to isolate variable

Solve for a.

$$2\left[h = \frac{1}{2}at^2 + vt\right]2$$

$$2h = at^2 + 2vt$$
$$-2vt \qquad -2vt$$

$$\frac{2h - 2vt}{t^2} = \frac{at^2}{t^2}$$