WHAT'S THE DIFFERENCE?

$6y^2 + 3y = 0$

$y = \{1, \frac{1}{2}\}$

$6y^2 + 3y$

$3y(2y+1)$

IF THERE IS AN Equal SIGN YOU MUST Solve !

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SOLVING & FACTORING STEPS

1. Make Sure one side =0.
2. Factor Like Normal
3. Set each Factor =0 & Solve For variable.

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SOLVE (GCF)

$6y^2 + 3y = 0$

$2(3y)y + (3y) = 0$

$3y(2y+1) = 0$

$\{0, -\frac{1}{2}\}$

$\frac{3y}{3} = \frac{0}{3}$

$y = 0$

$2y + 1 = 0$

$-1 \quad -1$

$\frac{2y}{2} = \frac{-1}{2}$

$y = -\frac{1}{2}$

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SOLVE (GCF)

$5x^2 = 5x$

$-5x \quad -5x$

$5x^2 - 5x = 0$

$\frac{5x}{5x} \quad \frac{-5x}{5x}$

$5x(x-1) = 0$

$\{0, 1\}$

$\frac{5x}{5} = \frac{0}{5}$

$x = 0$

$x - 1 = 0$

$+1 \quad +1$

$x = 1$

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SOLVE (GROUPING)

$(x^2 + x - 2x - 2) = 0$

$\{2, -1\}$

$x(x+1) - 2(x+1) = 0$

$(x-2)(x+1) = 0$

$x - 2 = 0$ | $x + 1 = 0$

$+2 \quad +2$ | $-1 \quad -1$

$x = 2$ | $x = -1$

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SOLVE (GROUPING

$x^2 - 3x - 7x = -21$

$+21 \quad +21$

$(x^2 - 3x)(-7x + 21) = 0$

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