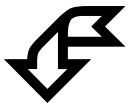
NO ↘	**Grouping Symbols** Does the equation contain grouping symbols? ( ) [ ] { } –
NO ↘	**Like Terms** Does the equation contain like terms on the left side? Does the equation contain like terms on the right side?
NO ↘	**Variables on both sides** Does the equation contain variables on both sides of the equal sign?
NO ↘	**Constants on both sides** Does the equation contain constants on both sides of the equal sign?
NO ↘	**Divide or Multiply** Is there a coefficient (other than 1) with the variable?
☺	*Time to Check* Now you have an equation that is a variable equals a number. It is time to check.

How to Solve Multi-Step Equations



If "No," move to the next step.

If "Yes," open the flap and follow the directions

Glue "No" Tab here

For ( ), [ ], and { }

Use the distributive property.

$3(2x + 7) \rightarrow 6x + 21$

For —

Undo the fraction, by multiplying both sides of the equation by the denominator.

$\frac{x+2}{3} = 10 \rightarrow x + 2 = 30$

Yes

Combine like terms on the left side of the equal sign. Combine like terms on the right side of the equal sign.

$4x + 2 - 3x \rightarrow x + 2$ **OR** $10 - 5x + 3 \rightarrow 13 - 5x$

Yes

Find the variable with the smaller coefficient. Undo that variable by adding the opposite to both sides of the equation.

$$2x + 5 = 4x - 3$$
$$-2x \quad -2x$$
$$5 = 2x - 3$$

Yes

Find the constant that is on the same side as the variable. Undo that constant by adding the opposite to both sides of the equation.

$$11 = 2x + 5$$
$$-5 \quad -5$$
$$6 = 2x$$

Yes

Undo the coefficient by using the inverse operation on both sides of the equation.

$4x = 12 \rightarrow$ divide by 4 **OR** $\frac{2x}{3} = 6 \rightarrow$ multiply by $\frac{3}{2}$

Yes

Check your solution by substituting the variable in the original equation with your solution. If it works, then you are finished! If not try again.

Yay!