5-Step Solving Graphic Organizer

Name: PERIOD 3

If the original question looks like this...	Notice	Remember
$-2(2p-3)-2p=-8(p+1)+4$	Grouping Symbols (Parenthesis) Use the **DISTRIBUTIVE PROPERTY** to simplify.	The term on the outside gets multiplied by each term on the inside. $-2(2p-3)$ $-4p+6$
$-4p+6-2p=-8p-8+4$	Combine **LIKE TERMS** on the left and/or right side of the equation.	Terms can be rearranged, if it helps. :) $-4p+6-2p$ $-4p-2p+6$ $-6p+6$
$-6p+6=-8p-4$ $\quad +6p \qquad +6p$	The **VARIABLE** appears once on the left and once on the right.	Move the **VARIABLE** to the left or right by adding or subtracting on both sides.
$6=-2p-4$ $+4 \qquad +4$	A **2**-**STEP** equation remains. Remove the **CONSTANT** by adding/subtracting on both sides.	A Do/Undo List may help. WHAT DO YOU SEE BEING DONE TO THE VARIABLE? DO | UNDO | HOW DO $\times(-2)$ | $+4$ | YOU -4 | $\div(-2)$ | UNDO THAT?
$\dfrac{10}{-2}=\dfrac{-2p}{-2}$	A **1**-**STEP** equation remains. Remove the **COEFFICIENT** by multiplying/dividing.	A Do/Undo List may help. DO | UNDO $\times(-2)$ | $\div(-2)$
$-5=p$ $p=-5$	The answer remains.	You can check your answer by substituting the number you got back into the original equation and using order of operations on both sides.

If the original question looks like this…	Notice	Remember
$5 - 7(x + 3) = -3x + 2(8 - 2x)$	Grouping Symbols (Parenthesis) Use the **DISTRIBUTIVE PROPERTY** to simplify.	The term on the outside gets multiplied by each term on the inside. $5 \; -7(x+3)$ $5 \;\; -7x - 21$
$5 - 7x - 21 = -3x + 16 - 4x$	Combine **LIKE TERMS** on the left and/or right side of the equation.	Terms can be rearranged, if it helps. :) $5 - 7x - 21$ $-7x + 5 - 21$ $-7x - 16$
$-7x - 16 = -7x + 16$ $+ 7x \qquad\qquad + 7x$	The **VARIABLE** appears once on the left and once on the right.	Move the **VARIABLE** to the left or right by adding or subtracting on both sides.
$-16 = 16$ ↑ FALSE	The variables **CANCELLED**. What kind of statement is left?	A **FALSE** statement means: **No Solutions**

If the original question looks like this…	Notice	Remember
$5(n - 7) = -35 + 5n$	Grouping Symbols (Parenthesis) Use the **DISTRIBUTIVE PROPERTY** to simplify.	The term on the outside gets multiplied by each term on the inside. $5(n-7)$ $5n - 35$
$5n - 35 = -35 + 5n$	Combine **LIKE TERMS** on the left and/or right side of the equation.	Occasionally, there are no **LIKE TERMS** on either side, and this step can be skipped.
$5n - 35 = -35 + 5n$ $-5n \qquad\qquad -5n$	The **VARIABLE** appears once on the left and once on the right.	Move the **VARIABLE** to the left or right by adding or subtracting on both sides.
$-35 = -35$ ↑ TRUE	The variables **CANCELLED**. What kind of statement is left?	A **TRUE** statement means: **INFINITE SOLUTIONS**.