solving equations

Steps	Example	Hint
Distributive Property	$2(3x-2) - 4x = 6x$ $6x - 4 - 4x = 6x$	Distributive property involves multiplying one term by all terms in the parentheses.
Combining Like Terms	$6x - 4 - 4x = 6x$ $2x - 4 = 6x$	A "like" term has the same variable. Combine any like terms on the same side of the equation. Remember the sign in front of the term goes with it.
Inverse Operations	$2x - 4 = 6x$ $-2x \quad -2x$ $\frac{-4}{4} = \frac{4x}{4}$ $-1 = x$	Inverse means opposite. Do the "opposite" operation to eliminate terms in order to isolate the variable.

interpreting the solution

No Solution	One Solution	Infinite Solutions
There is no number that will make the equation true.	There is one number that can make the equation true.	Any number will make the equation true.
$4(r + 1) + r = 5r$ $4r + 4 + r = 5r$ $5r + 4 = 5r$ $-5r \quad -5r$ $4 \neq 0$	$4(r + 1) + r = 13r$ $4r + 4 + r = 13r$ $5r + 4 = 13r$ $-5r \quad -5r$ $\frac{4}{8} = \frac{8r}{8}$ $\frac{1}{2} = r$	$4(r + 1) + r = 5r + 4$ $4r + 4 + r = 5r + 4$ $5r + 4 = 5r + 4$ $-5r \quad -5r$ $4 = 4$
Since 4 can never equal 0, there is no solution. There is no number that can make this equation true.	*There is only one number that r can be to make this equation true. That number is ½.*	Since this is always true, ANY number will make this equation true.