Literal Equations-Investigation

1) Solve each equation for x.

Equation 1: $2x + 4 = 12$		Equation 2: $ax + b = c$
	Describe the Operations used to get x alone.	
	Describe what terms you were able to combine/simplify.	
	How does the solution appear?	

Another approach...

If $a = 2$, $b = 4$ and $c = 12$ then equation 2 above is the same as equation 1.

Show that substituting these values into the solution for equation 2 gives the same solution as equation 1.

2) Find the value of x in the equations below.

a) $3x+1=7$ b) $-2x+5=11$ c) $4x+3=-1$

3) Find the values of a, b, and c in the equations above and show that when substituted into $x=\frac{c-b}{a}$ the solutions are the same as those obtained above.

4) Two ways to approach the equation $a(x+b)=c$

Method 1: Divide both sides by a first	Method 2: Distribute a first

Why are the two solutions above really the same? Explain.