

Completing the Square

1) make sure formula is in form: $ax^2 + bx + c = 0$
(it HAS to be in the right order!)

(remember a,b, and c are COEFFICIENTS only - do NOT include x part!)

pay attention!! At this point if it's ALREADY a perfect square trinomial, you don't have to do the rest!!! you could skip to #5

2) move "c" (the constant) over to the other side of the = sign

3) get rid of any "a" by dividing ALL terms on BOTH sides of the equal sign by that number; leaving x^2 with no coefficient
(this may result in fractions for b and/or c)

4) take 1/2 of "b" and SQUARE it, then add it to both sides of the equation

5) you should now be able to factor the perfect square trinomial you have created - turn it into a binomial squared . . .

6) take the square root of both sides - remember square roots are always PLUS or MINUS

7) isolate the x, simplify any radicals that remain if possible --- you should have TWO answers for x when solving a quadratic equation!!!!
(sometimes both answers are the same number, but there are still two!)