7.5.A Solving a Quadratic Equation by Factoring!!!!

Let's look at some resources to see how this is done!

Purple Math is a great website.....

Another great site is Cool Math

Hey....there is a website that will factor your quadratic equation and solve it for you!

Apr 3-9:04 AM

Solve these tricky equations for all the variables given:

1. $a \bullet b = 0$
2. $a \bullet b \bullet c = 0$
3. $x \bullet y \bullet z \bullet a = 0$
4. $2 \bullet b = 0$
5. $a \bullet 8 = 0$

Apr 3-9:04 AM

What is true about all the equations you just solved?

Fill in the blanks:

If you multiply one or _____ variables together and their product = _____, then one or more of the variables must = _____ .

This is the:

Apr 3-9:04 AM

What math property are we using that allows us to solve a quadratic equation by factoring?

_____

Steps to solve a quadratic by factoring:

1. Set the quadratic equation equal to zero
2. Factor the equation
3. Set each factor equal to zero and solve for the variable

Apr 3-9:04 AM

Check to be sure they are set equal to zero first....then factor and set each factor equal to zero and solve.

Ex: $x^2 + 10x = -24$

Step 1: + 24 + 24 (set = 0)

$x^2 + 10x + 24 = 0$

Step 2: $(x + 6)(x + 4) = 0$ (factor)

Step 3: $x + 6 = 0$ $x + 4 = 0$ (set each factor = to 0 and solve)

-6 -6 -4 -4

$x = -6$ and $x = -4$

Ex: $x^2 - 66 = -5x$

Apr 3-8:57 AM

If your problem is already in factored form and set equal to zero, you can just set each factor equal to zero and solve....

Ex: $(4x + 1)(3x - 6) = 0$

Ex: $(9x - 2)(x - 6) = 0$

Apr 3-9:04 AM

Check to be sure they are set equal to zero first....then factor and set each factor equal to zero and solve.

Ex: $y^2 = -7y - 10$

Ex: $3y^2 + 2y = 1$

Apr 3-9:04 AM

$A = x^2 + 10x + 9$

If the area of this rectangle is $x^2 + 10x + 9$, what is the value of x? Use the product property.

*is your answer(s) reasonable?

Apr 3-9:04 AM