

To find the factors of a quadratic expression, you work backwards. It is the reverse of the FOIL process.

Quadratic equation is an equation that contains a squared variable. Quadratic equations usually have 2 different solutions. In other words, there are two values for the variable that will make the equation true.

Steps to Solving Quadratic Equations:

- Set the quadratic expression equal to 0 by adding or subtracting the number on the right side of the = to both sides of the =. (ex: $x^2 + 7x = 20$. Subtract 20 from both sides of the = to end with $x^2 + 7x - 20 = 0$)
- Factor the quadratic expression. (Find the two factors that when multiplied equal the last number and that when added together equal the middle term.)
- For each factor, determine the value of x that will factor equal to 0.
- Check by substituting the x values into the original equation.

Select the best answer to the following questions and type it on the line provided.

1. Solve $y^2 - 8y = -15$ _____
 - a. $y = -3$ and $y = -5$
 - b. $y = -3$ and $y = 5$
 - c. $y = 3$ and $y = -5$
 - a. $y = 3$ and $y = 5$
2. Which of the following factors equal the sum of -7 and the product of -60? _____
 - a. -10, 6
 - b. -30, 2
 - c. -12, 5
 - d. +12, -5
3. Which of the following factors give the sum of -2 and the product of -35? _____
 - a. 7, -5
 - b. -7, 5,
 - c. -7, -5
 - d. 7, 5
4. Solve $x^2 - 8x = -16$ _____
 - a. $x = 4$
 - b. $x = -4$
 - c. $x = 2$
 - e. $x = -2$

5. Which of the following signs complete this equation? $(x \underline{\quad} 3)(x \underline{\quad} 7) = x^2 - 4 - 21$ _____
- a. +, +
 - b. +, -
 - c. -, +
 - f. -, -
6. What are the values of x that will satisfy $2x^2 - 10x = -12$? _____
- a. $x = -3$ and $x = -2$
 - b. $x = 3$ and $x = 2$
 - c. $x = 4$, and $x = 3$
 - d. $x = -4$ and $x = -3$
7. What are the values of x that will satisfy $x^2 - 9x = -20$? _____
- a. $x = -4$ and $x = 5$
 - b. $x = 4$ and $x = -5$
 - c. $x = -4$ and $x = -5$
 - d. $x = 4$ and $x = 5$