

A. Graphing the Function:

$$y =$$

1. Set equation equal to "0", then change 0 to y.

2. Only shows/finds REAL zeros/roots; were the graph crosses the x-axis

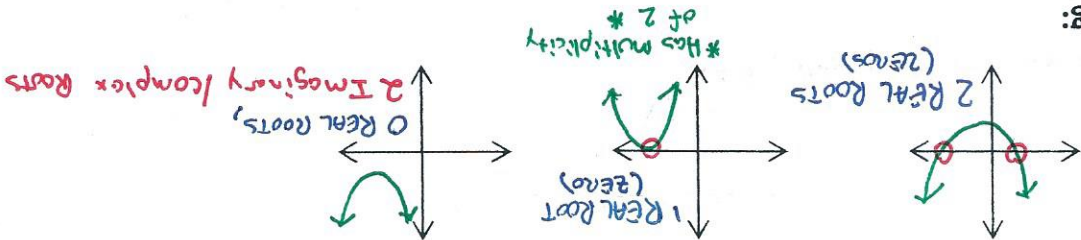
B. Factoring:

1. Set equation equal to "0".

2. Must factor the quadratic to its binomial factors; factoring is the method not the solution.

3. Once factor, use the Zero Product Property (set factors equal to zero and solve for x.)

4. Finds only REAL roots/solutions.



C. Square Root Property:

1. Equation has to be in the form: $ax^2 + c = 0$ or $(x + \#)^2 = c$

The equation DOES NOT have to be set equal to zero.

2. Isolate the x^2 and then take the square root of both sides.

3. There are \pm possible roots; so on the right of the =, use the \pm ie $\pm \sqrt{\quad}$

4. Finds both Complex and Real roots/solutions.

D. Complete the Square:

1. Used to make a the quadratic expression into a perfect square ie $(x - h)^2$

2. The equation DOES NOT have to be set equal to zero; BUT "a" has to equal 1 and "c" has to be moved to the right.

3. Use the Square Root Property to finish solving the equation.

4. Finds both Complex and Real roots/solutions.

E. Quadratic Formula:

* THIS METHOD WILL ALWAYS WORK!!!! *

2. Set equation equal to zero.

3. Find values for "a", "b", and "c" and then substitute into the formula.

4. DO NOT try and put the entire formula into your calculator all at once.

5. Make two equations because of the \pm in the formula and then solve for each "x".

6. Finds both Complex and Real roots/solutions.

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$