Method	Advantages	Disadvantages
Factoring	• Straightforward when the equation can be factored easily	• Some equations are not factorable
Graphing	• Can easily see the number of solutions • Use when approximate solutions are sufficient • Can use a graphing calculator	• May not give exact solutions
Using Square Roots	• Used to solve equations of the form $x^2 = c$	• Can only be used for certain equations
Completing the Square	• Best used when a = 1 and b is even	• May involve difficult calculations
Quadratic Formula	• Can be used for any quadratic equation • Gives exact solutions	• Takes time to do

Types of Factoring

- GCF (always check for first)
- DOTS (Difference of Two Squares)
- Trinomial
- Tricky Trinomial (4-steps)

Graphing

- Use the equation for the axis of symmetry $x = \frac{-b}{2a}$ to find the x value of the turning point.
- Adjust your graphing calculator appropriately to use the proper interval

Using Square Roots

- Only used when no "x" term
- When taking the square root, don't forget BOTH solutions
- Make sure your answer is in SIMPLEST radical form

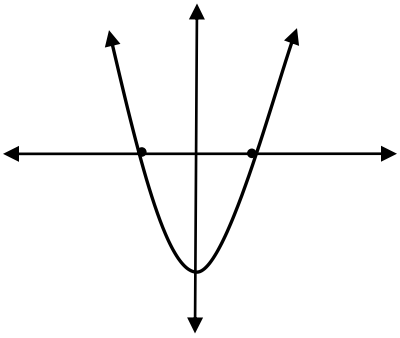
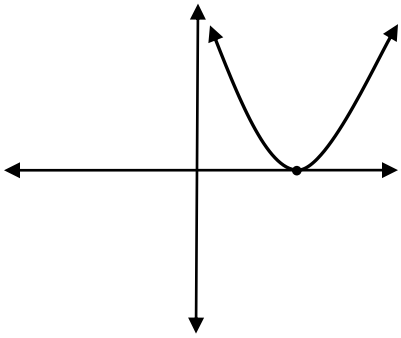
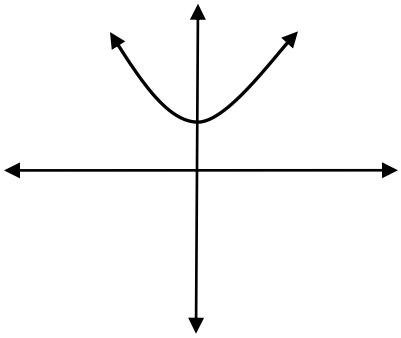
Completing the Square

- Don't forget to add/subtract to BOTH sides
- Don't forget to separate equations into "+" and "-"to find values of x

Quadratic Formula

- $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
- Don't forget to separate equations into "+" and "-"to find values of x

Interpreting the Discriminant

$b^2 - 4ac > 0$	$b^2 - 4ac = 0$	$b^2 - 4ac < 0$
		
• two real solutions • two x-intercepts	• one real solution • one x-intercept	• no real solutions • no x-intercepts