

Algebra 2
Solving Quadratic Inequalities Notes



Today I will...	I'll know I've got it when...	Essential Question(s)

To solve a quadratic inequality algebraically...

Step 1: Get zero on one side of the inequality.

Step 2: Solve the related quadratic equation using factoring.

Step 3: Set up a table/graph. The solutions from Step 2 will help you do this.

Step 4: Pick a test value within each interval to determine the sign of each factor over the interval and then the product of the factors over the intervals.

Step 5: Graph your solution on the number line below your table.

Step 6: Write interval notation for the solution set.

Example 1: Solve $x^2 - 6x + 5 < 0$.

Example 2: $x^2 + 9x > -20$

Example 3: $x^2 + 16 \geq 8x$

Example 4: $16x^2 < 8x - 1$

Example 5: $5x^2 - 25 \geq 4x^2 + 24$