Math 3 **3.6 Quadratic Inequalities** Unit 3

*SWBAT solve quadratic inequalities and write solutions in interval notation.*

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| --- | --- | --- | --- | --- | --- |
| **<** | **>** | **<** | **>** | **+∞** | **−∞** |
| Bracket or Parenthesis? | Bracket or Parenthesis? | Bracket or Parenthesis? | Bracket or Parenthesis? | Bracket or Parenthesis? | Bracket or Parenthesis? |

**Example 1:** Solve the following given the inequality and the graph below.

1. a) –x2 + 6x – 9 > 0



1. 

**How to solve Quadratic Inequalities algebraically:**

*Step 1:* Set inequality to zero

*Step 2:* Factor

Step 3: Solve for x-intercepts

*Step 4:* Sketch a graph based on the x-intercepts and the “a” value

*Step 5:*  Write solution in interval notation

**Example 2:** Solve each of the following algebraically. Write your final answer in interval notation.