



Lesson Objectives (p. 366):

Vocabulary

1. Quadratic inequalities in two variables (p. 366):

Key Concepts

2. Graphing Quadratic Inequalities (p. 366):

TO GRAPH A QUADRATIC INEQUALITY
1.
2.
3.

3. Get Organized Compare the solutions of quadratic equations and inequalities. (p. 370).

	EQUATION (=)	"LESS THAN" INEQUALITY (< or ≤)	"GREATER THAN" INEQUALITY (> or ≥)
Example			
Graph			
Solution Set			





Lesson Objectives (p. 366):

solve quadratic inequalities by using tables and graphs; solve quadratic

inequalities by using algebra.

Vocabulary

1. Quadratic inequalities in two variables (p. 366): an inequality that can be

written in one of the following forms, where *a*, *b*, and *c* are real numbers

and $a \neq 0$. Its solution is a set of ordered pairs (*x*, *y*).

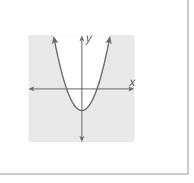
 $y < ax^{2} + bx + c \qquad y > ax^{2} + bx + c$ $y \le ax^{2} + bx + c \qquad y \ge ax^{2} + bx + c$

Key Concepts

2. Graphing Quadratic Inequalities (p. 366):

TO GRAPH A QUADRATIC INEQUALITY

- 1. Graph the parabola that defines the boundary.
- 2. Use a solid parabola for \leq and \geq and a dashed parabola for < and >.
- 3. Shade above the parabola for $y > \text{ or } \ge$ and below the parabola for $y \le \text{ or } <$.



3. Get Organized Compare the solutions of quadratic equations and inequalities. (p. 370).

	EQUATION (=)	"LESS THAN" INEQUALITY (< or ≤)	"GREATER THAN" INEQUALITY (> or ≥)
Example	$x^2-4=0$	$x^2 - 4 < 0$	$x^2 - 4 > 0$
Graph	-3 -2 -1 0 1 2 3	< + -3 −2 −1 0 1 2 3	-3 -2 -1 0 1 2 3
Solution Set	$x = \pm 2$	-2 < x < 2	<i>x</i> < −2 or <i>x</i> > 2