

Name: _____ Hour: _____ Date: _____

NOTES: Section 9.8 – Graphing Quadratic Inequalities

Goals: #1 - I can graph a quadratic inequality in two variables.

Homework: Section 9.8 Worksheet



Warm Up: Find the value of the discriminant. Then use the value to determine whether the equation has *two solutions*, *one solution*, or *no real solution*.

1. $x^2 + 3 = 0$

2. $x^2 - 6x + 13 = 0$

3. $x^2 - 2x + 1 = 0$

Exploration #1: Work with a partner. Answer the following questions.

1. Which of the following ordered pairs are solutions of $y \geq x^2 - 3x - 3$?

a. (1, 4)

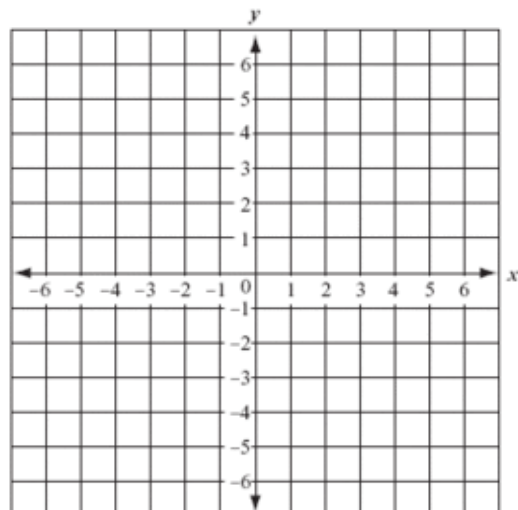
b. (3, 2)

c. (4, -3)

d. (0, -3)

Exploration #2: Graph the following linear inequality.

1. $y \leq \frac{3}{4}x + 1$



Name: _____ Hour: _____ Date: _____

Notes:

To graph quadratic inequalities, we need to first _____ the function.

We use a _____ line for _____ and a _____ line for _____.

Then, we _____ points not on the line to determine where to _____.

Example #1: Graph the following quadratic inequalities.

1. $y < 2x^2 - 3x$

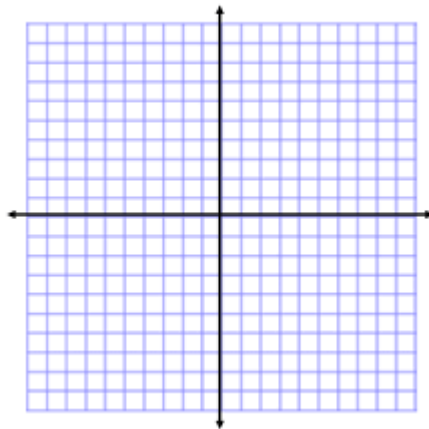
2. $y \leq -x^2 - 5x + 4$

AOS: _____

vertex: _____

y-int: _____

opens: _____



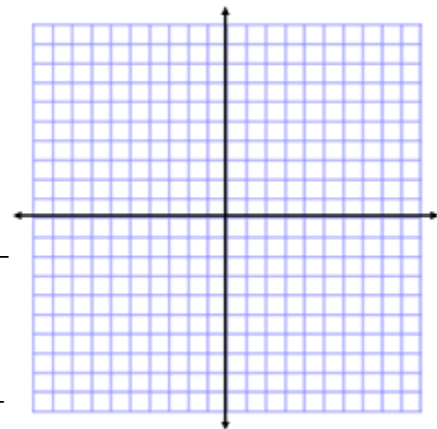
x					
y					

AOS: _____

vertex: _____

y-int: _____

opens: _____



x					
y					

Name: _____ Hour: _____ Date: _____

You practice: Graph the following quadratic inequalities.

1. $y > -x^2 - 2x + 3$

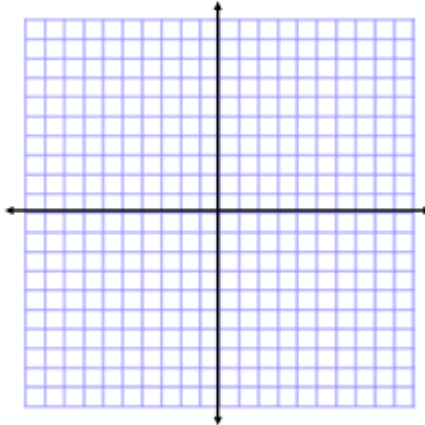
2. $y \geq 2x^2 - 4x + 2$

AOS: _____

vertex: _____

y-int: _____

opens: _____

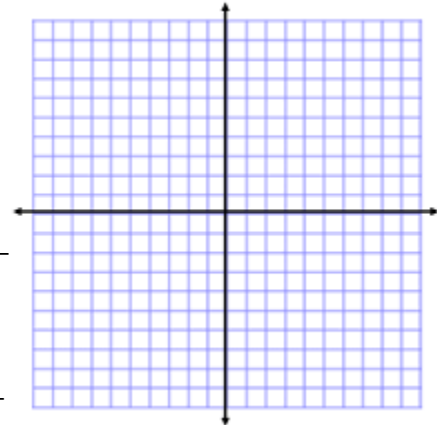


AOS: _____

vertex: _____

y-int: _____

opens: _____



x					
y					

x					
y					