

1. Find the vertex:  $\left(\frac{p+r}{2}, f\left(\frac{p+r}{2}\right)\right)$  or  $\left(-\frac{b}{2a}, f\left(-\frac{b}{2a}\right)\right)$
2. Factor the quadratic, solve for roots
3. Graph the function
4. Choose a test point (0,0) if not on graph
  - i. Evaluate test point
  - ii. If TRUE shade point section
  - iii. If FALSE shade other section

EX:  $y > x^2 - 2x - 3$

$y > (x - 3)(x + 1)$

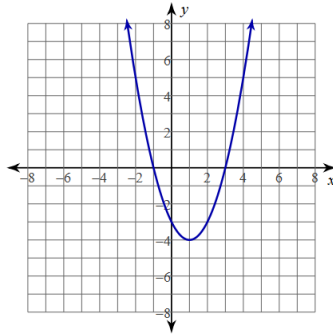
$x = 3, -1$

$(1, -4)$

factor.

roots

vertex.



Test Point: (0,0)

Evaluate Test Point:  $0 > f(0)$

$0 > -3 \checkmark$

Give three Possible Solutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1.  $x^2 + 8x + 16 \geq y$

equation.

2.  $x^2 + 4x + 4 < y$

equation.

\_\_\_\_\_ factor.

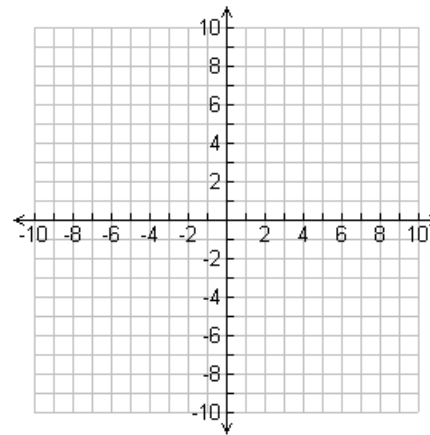
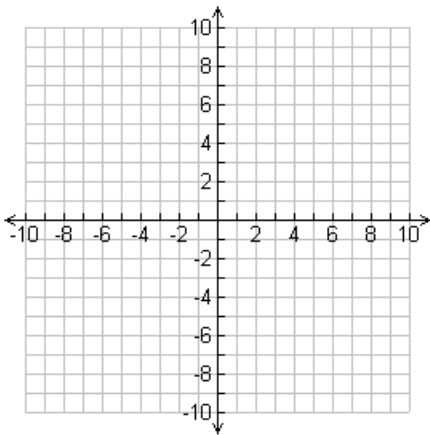
\_\_\_\_\_ roots

\_\_\_\_\_ vertex.

\_\_\_\_\_ factor.

\_\_\_\_\_ roots

\_\_\_\_\_ vertex.



Test Point: \_\_\_\_\_

Evaluate Test Point: \_\_\_\_\_

\_\_\_\_\_

Give three Possible Solutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Test Point: \_\_\_\_\_

Evaluate Test Point: \_\_\_\_\_

\_\_\_\_\_

Give three Possible Solutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Teacher: \_\_\_\_\_

Class/ Block: \_\_\_\_\_

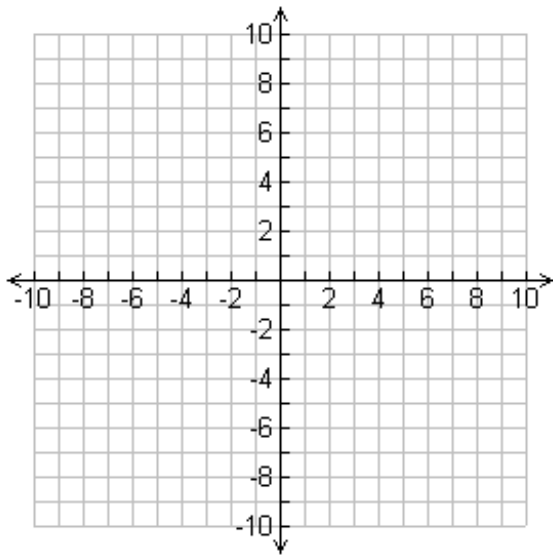
Date: \_\_\_\_\_

3.  $x^2 - 6x + 8 \geq y$  equation.

\_\_\_\_\_ factor.

\_\_\_\_\_ roots

\_\_\_\_\_ vertex.



Test Point: \_\_\_\_\_

Evaluate Test Point: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Give three Possible Solutions: \_\_\_\_\_

\_\_\_\_\_

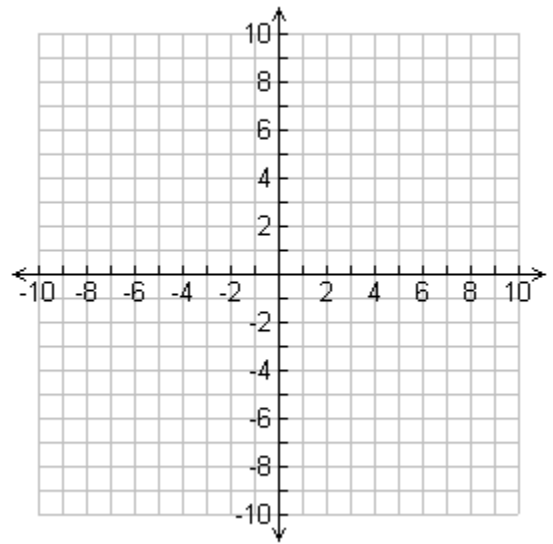
\_\_\_\_\_

4.  $x^2 - 10x + 16 \leq y$  equation.

\_\_\_\_\_ factor.

\_\_\_\_\_ roots

\_\_\_\_\_ vertex.



Test Point: \_\_\_\_\_

Evaluate Test Point: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Give three Possible Solutions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_