

## Algebra 3 Assignment # 5

Sketch a graph of each of the following. Label the vertex, focus, and directrix please.

(1)  $x^2 + 2x - 4y + 9 = 0$

(2)  $y^2 - 4y - 8x - 20 = 0$

(3)  $x^2 - 2x + 6y + 19 = 0$

(4)  $y^2 + 8x + 32 = 0$

(5)  $4x^2 - 4x - 12y - 17 = 0$

(6)  $y^2 + 6y - 6x + 21 = 0$

(7)  $x^2 + 4x + 4y + 4 = 0$

(8)  $4y^2 - 12y + 20x + 19 = 0$

## **Algebra 3 Assignment # 5**

### **Answers**

$$(1) (x + 1)^2 = 4(y - 2)$$

$$(2) (y - 2)^2 = 8(x + 3)$$

$$(3) (x - 1)^2 = -6(y + 3)$$

$$(4) y^2 = -8(x + 4)$$

$$(5) \left(x - \frac{1}{2}\right)^2 = 3\left(y + \frac{3}{2}\right)$$

$$(6) (y + 3)^2 = 6(x - 2)$$

$$(7) (x + 2)^2 = -4(y - 0)$$

$$(8) \left(y - \frac{3}{2}\right)^2 = -5\left(x + \frac{1}{2}\right)$$