

## Q4 HW1 - All work on looseleaf.

Date\_\_\_\_\_ Period\_\_\_\_\_

**Use the information provided to write the standard form equation of each circle.**

1) Center:  $(4, -16)$   
Radius: 2

2) Center:  $(16, -9)$   
Radius: 3

**Identify the center and radius of each. Then sketch the graph.**

3)  $(x + 1)^2 + (y - 2)^2 = 13$

4)  $(x - \sqrt{6})^2 + \left(y + \frac{5}{2}\right)^2 = 4$

5)  $x^2 + y^2 + 8x - 6y + 24 = 0$

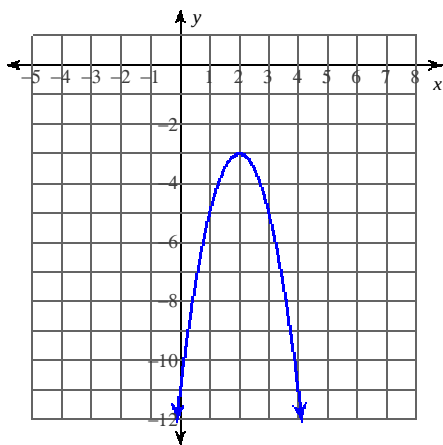
6)  $x^2 + y^2 + 8x - 8y + 23 = 0$

**Use the information provided to write the vertex form equation of each parabola.**

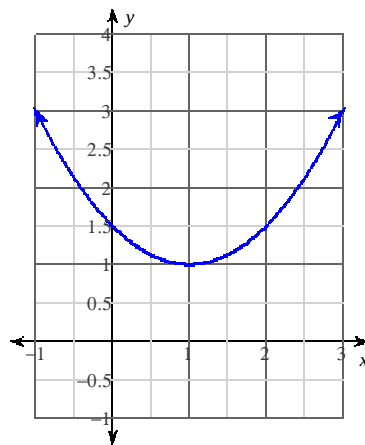
7)  $y = x^2 - 8x + 20$

8)  $y = 3x^2 + 36x + 109$

9)



10)

**Identify the center, major axes vertices, co-vertices, and foci of each. Then sketch the graph. Note: co-vertices are another name for the minor axes vertices.**

11)  $9x^2 + 16y^2 + 18x - 112y + 61 = 0$

12)  $9x^2 + y^2 - 36x + 2y + 1 = 0$