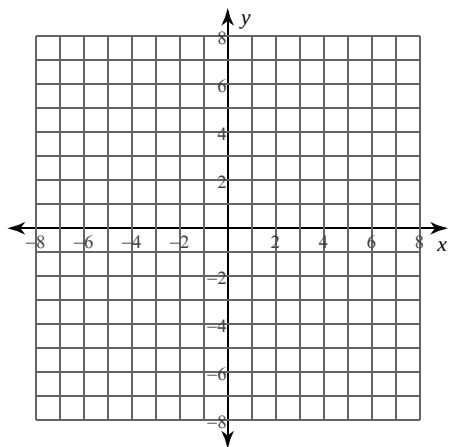
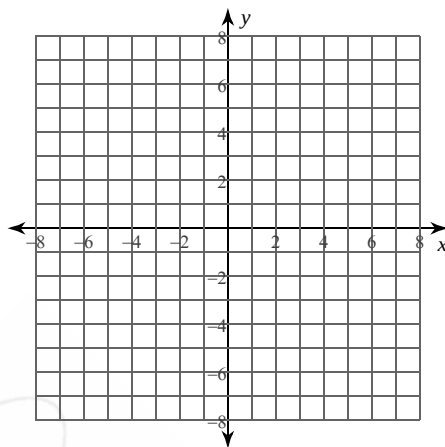


Identify the center and radius of each. Then sketch the graph.

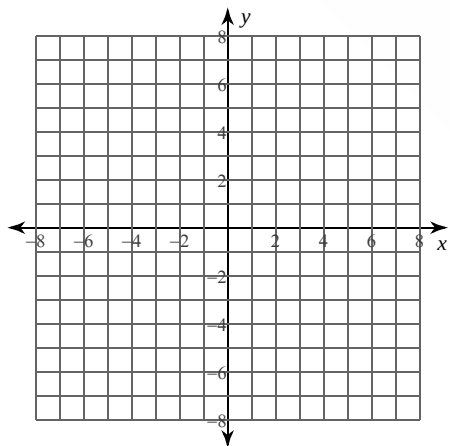
1) $7 + y^2 - 8x = -x^2$



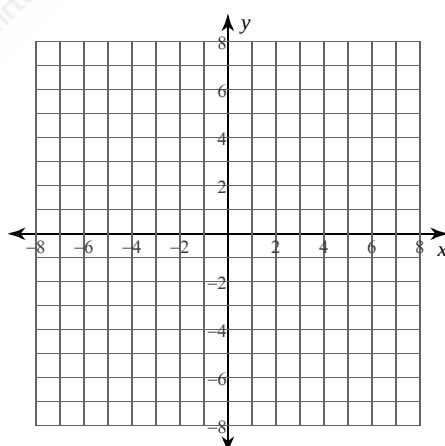
2) $-8y + y^2 + 8x = -31 - x^2$



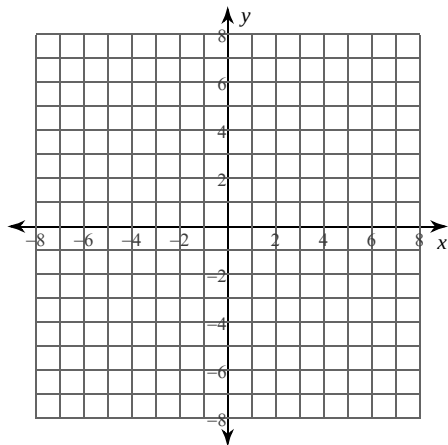
3) $11 + 4x = -8y - y^2 - x^2$



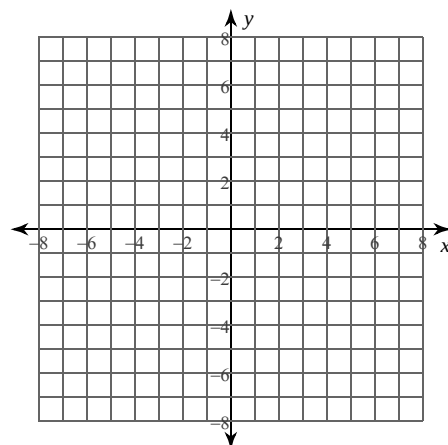
4) $x^2 + y^2 = 39$



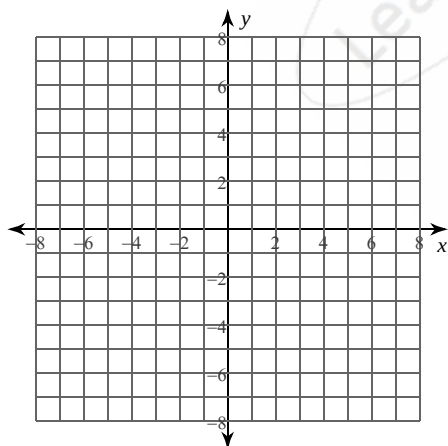
5) $x^2 + 4y = -y^2$



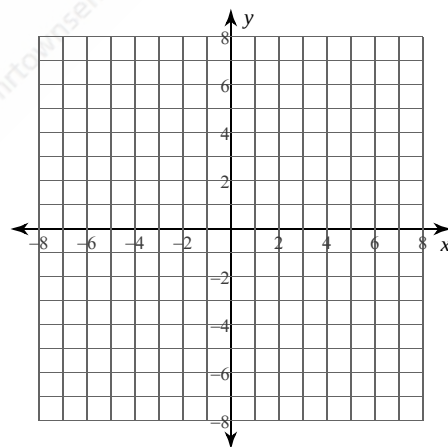
6) $2y^2 + 6x = -2x^2 + 10y + 1$



7) $33 = -2x^2 - 14x - 14y - 2y^2$

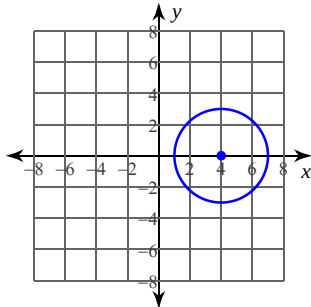


8) $\left(x - \frac{5}{2}\right)^2 + (y - 4)^2 = 8$



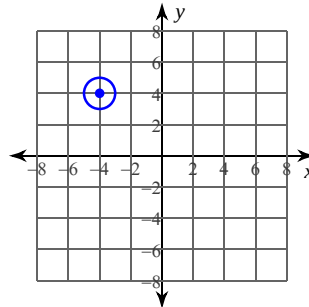
Answers to

1)



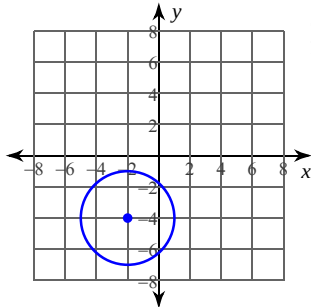
Center: $(4, 0)$
Radius: 3

2)



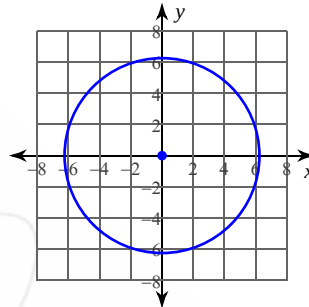
Center: $(-4, 4)$
Radius: 1

3)



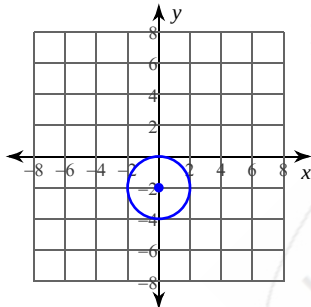
Center: $(-2, -4)$
Radius: 3

4)



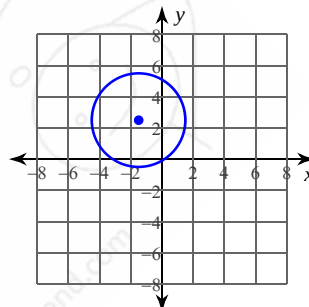
Center: $(0, 0)$
Radius: $\sqrt{39}$

5)



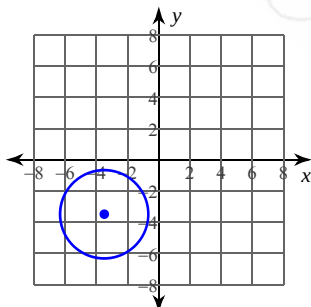
Center: $(0, -2)$
Radius: 2

6)



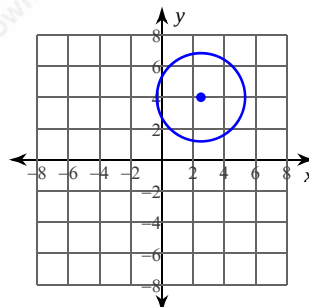
Center: $(-\frac{3}{2}, \frac{5}{2})$
Radius: 3

7)



Center: $(-\frac{7}{2}, -\frac{7}{2})$
Radius: $2\sqrt{2}$

8)



Center: $(\frac{5}{2}, 4)$
Radius: $2\sqrt{2}$