**Circles**

$$(x - h)^2 + (y - k)^2 = r^2$$

**Circle with center (h, k) with radius r**

1. **Find the center and radius of the circle, $x^2 + y^2 = 3^2$**

2. **Find the center and radius of the circle, $(x - 3)^2 + (y - 5)^2 = 2^2$**

3. **Find the center and radius of a circle, $(x - 3)^2 + (y + 5)^2 = 2^2$**

4. **Find the center and radius of a circle, $(x + 4)^2 + (y - 3)^2 = 25$**

5. **Find the center and radius of a circle, $x^2 + y^2 + 4x - 6y - 12 = 0$**

6. **Find the center and radius of a circle, $x^2 + y^2 - 8x + 4y = 16$**

7. **Find the center and radius of a circle, $x^2 + y^2 - 6y - 7 = 0$**

8. **Write and equation of a circle with center (–2, 3) and radius 6**

9. **Write an equation of a circle with center (4, – 5) and radius 7**

10. **How was the equation of the circle derived?**