

Name: _____

Circle**Exercise 1:** Write the standard equation, and then find the center, and the radius for each circle.

1) $x^2 + y^2 - 8x + 14y + 57 = 0$

2) $x^2 + y^2 - 10x + 4y + 27 = 0$

3) $x^2 + y^2 + 16x + 64 = \frac{225}{121}$

4) $x^2 + y^2 + 12x + 2y + 37 = \frac{4}{9}$

5) $x^2 + y^2 - 4x + 10y + 29 = \frac{1}{25}$

6) $x^2 + y^2 + 2x + 12y + 37 = \frac{361}{49}$

7) $x^2 + y^2 + 6x - 16y + 73 = \frac{1}{4}$

8) $x^2 + y^2 + 14x - 8y + 65 = \frac{4}{9}$

Exercise 2: Find the standard equation of the circle such that:

- 1) center (1,-3) and radius of 5
- 2) diameter is 24 and whose center is at the origin
- 3) center (7,-6) and radius of 9
- 4) center (1,0) and radius of 7
- 5) center (0,-7) and radius of 4
- 6) center (0,9) and diameter of 20

Exercise 3: Find the coordinates of the center of the circle

1) $(x+3)^2 + (y-5)^2 = 16$

2) $(x+1)^2 + (y+7)^2 = 13$

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

4) $(x-9)^2 + y^2 = 100$

5) $(x-8)^2 + (y-4)^2 = 121$

6) $x^2 + (y-1)^2 - 64 = 0$