

Determine the center and radius for each equation of a circle given. (all square roots must be in simplest form)

1) $(x + 12)^2 + (y - 5)^2 = 400$

Center: _____

radius = _____

2) $(x - \frac{1}{3})^2 + (y + \frac{2}{5})^2 = 24$

Center: _____

radius = _____

3) $x^2 + y^2 - 4y - 10x = 7$

Center: _____

radius = _____

4) $x^2 + y^2 + 12y + 16 = 0$

Center: _____

radius = _____

Change each equation into center-radius form.

5) $2x^2 + 2y^2 + 8x - 12y = 24$

6) $-3x^2 - 3y^2 - 24x - 9y - 8 = 0$

Write an equation in circle-radius form for each circle using the information given.

7) C(1, -8) and $r = 2.5$ Equation: _____

8) C(-18, 0) and $r = \frac{2}{7}$ Equation: _____

9) C(0, 7) and $r = \sqrt{11}$ Equation: _____

10) C(-1, -4) and passes thru (2, -8) Equation: _____

11) (4, 0) and (8, -6) are the endpoints of the circle's diameter Equation: _____

12) Tangent to the line $x = -5$ and has an x-intercept of -12 Equation: _____

13) Find the intersection point or points to the following system. If they do not intersect state so.

$$\begin{aligned}x - y &= 5 \\x^2 + y^2 &= 53\end{aligned}$$