Identify the center and radius of each circle.

1) $(x-2)^2+(y-4)^2=36$

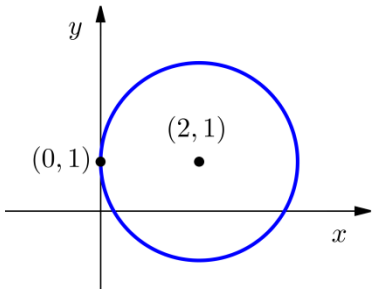
2) $(x-5)^2+y^2=25$

3) $x^2+y^2=49$

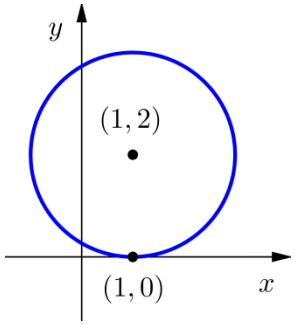
4) $x^2+(y+5)^2=\frac{1}{9}$

Write the standard form of the equation of each circle shown.

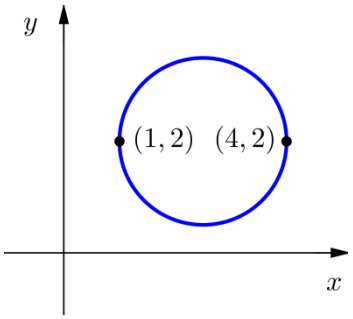
5)



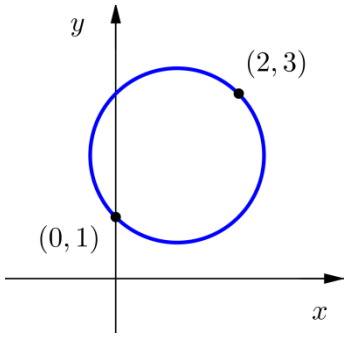
6)



7)



8)



Write the standard form of the equation of each circle described.

9) Center: $(0, 0)$ Radius: 5

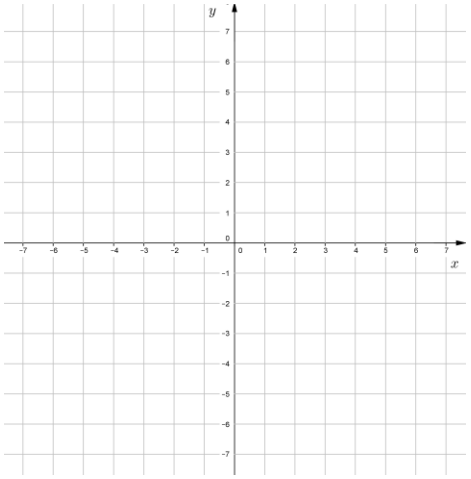
10) Center: $(-4, 7)$ Radius: $\sqrt{3}$

11) Center: $(6, 1)$, tangent to the y-axis.

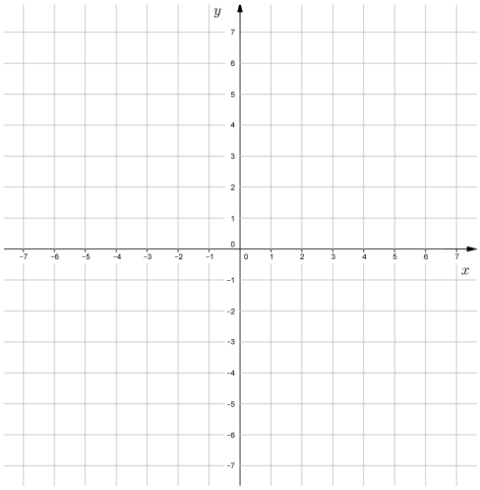
12) Center: $(3, -2)$, tangent to $y = 2$

Write the standard form of each equation. Then graph the equation.

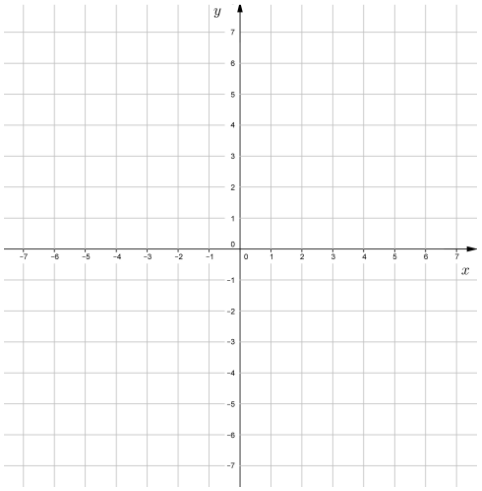
13) $36 - x^2 = y^2$



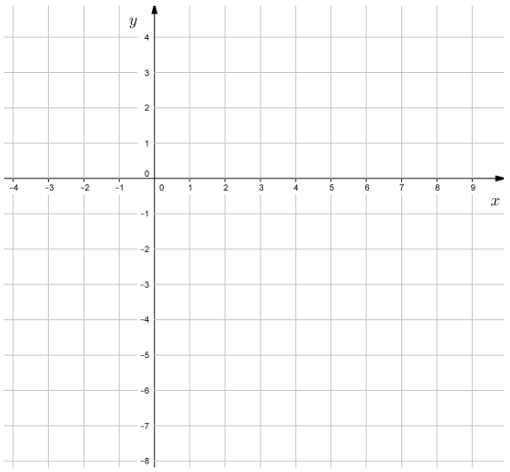
14) $x^2 + y^2 + y = \frac{3}{4}$



15) $x^2 + y^2 - x + 2y + 1 = 0$



16) $2x^2 + 2y^2 - 12x + 8y - 24 = 0$



Write the standard form of the equation of the circle that passes through the points with the given coordinates.

17) $(7, -1), (11, -5), (3, -5)$

$\boxed{(x-7)^2 + (y+5)^2 = 16}$

18) $(-2, 3), (6, -5), (0, 7)$

$\boxed{(x-5)^2 + (y-2)^2 = 50}$

Find an equation of the circle described. (A Sketch may be helpful.)

19) Center in quadrant II, radius 3 and tangent to the y-axis at $(0, 4)$.

20) Center on the line $y - 4 = 0$ and tangent to the x-axis at $(-2, 0)$.

21) Center in quadrant four, tangent to the lines $x = 1$, $x = 9$, and $y = 0$.

22) Tangent to both coordinate axes and the line $x = -8$. (Two answers)