2.4 day 1 homework

Find the radius of the circle

1) Center: (3, 7)
   Point on Circle: (−3, 15)
   Radius = 10

2) Center: (−8, 14)
   Point on Circle: (−5, 11)
   \( r = \sqrt{18} = 3\sqrt{2} \)

Find the center of the circle

3) Ends of a diameter: (−3, −3) and (9, −1)
   \((3, -2)\)

4) Ends of a diameter: (18, −2) and (2, −12)
   \((10, -7)\)

Use the information provided to write the standard form equation of each circle.

5) Center: (−13, 0)
   Radius: 5
   \((x + 13)^2 + y^2 = 25\)

6) Center: (9, −8)
   Radius: 6
   \((x - 9)^2 + (y + 8)^2 = 36\)

7) Center: (−1, 7)
   Radius: 6
   \((x + 1)^2 + (y - 7)^2 = 36\)

8) Center: (10, 14)
   Radius: 2
   \((x - 10)^2 + (y - 14)^2 = 4\)

Use the information provided to find the center and radius of the circle.

9) \((x + 3)^2 + (y + 11)^2 = 64\)
   Center: (−3, −11)
   \(R = 8\)

10) \((x + 12)^2 + y^2 = 49\)
    Center: (−12, 0)
    \(R = 7\)

Identify the center and radius of each. Then sketch the graph. Find the intercepts, if any.

11) \((x − 2)^2 + (y + 3)^2 = 9\)
    Center: (2, −3)
    \(R = 3\)

12) \(x^2 + (y − 2)^2 = 16\)
    Center: (0, 2)
    \(R = 4\)