

Circles

Write the standard form of the equation of the circle given the endpoints of a diameter.

1. $(3, 11)$ and $(-9, -5)$
2. $(1, 8)$ and $(-5, 0)$
3. $(9, 13)$ and $(-3, -3)$

Write the standard form of the equation of the circle and find the center and radius.

4. $x^2 + y^2 + 6x + 14y + 37 = 0$
5. $x^2 + y^2 - 12x + 6y + 19 = 0$
6. $x^2 + y^2 + 12x - 12y + 25 = 0$

Answers

1. $(x+3)^2 + (y-3)^2 = 100$

2. $(x+2)^2 + (y-4)^2 = 25$

3. $(x-3)^2 + (y-5)^2 = 100$

4. $(x+3)^2 + (y+7)^2 = 21$; $C(-3, -7)$, $r = \sqrt{21}$

5. $(x-6)^2 + (y+3)^2 = 26$; $C(6, -3)$, $r = \sqrt{26}$

6. $(x+6)^2 + (y-6)^2 = 47$; $C(-6, 6)$, $r = \sqrt{47}$