

Name : _____

Score : _____ Date : _____

Writing Equations of Circles

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

1 $x^2 + y^2 + 8x - 2y = -12$

2 $y^2 + 2x + x^2 = 24y - 120$

3 $x^2 + 2x + y^2 = 55 + 10y$

4 $139 + 5y = -y^2 - x^2 - 24x$

5 $x^2 + y^2 + 7x + 8y = -18$

6 $x^2 + y^2 + 16x + 2y = -36$

7 Center : $(-12, -8)$
Radius : 4

8 Center : $(-6, -15)$
Radius : $\sqrt{5}$

9 Center : $(-15, 3\sqrt{7})$
Area : 2π

10 Center : $(-11, -14)$
Radius : 16π

11 Center : $(-4, -12)$
Circumference : 9π

12 Center : $(19, 14)$
Circumference : $2\pi\sqrt{15}$

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Writing Equations of Circles

Answers

1 $x^2 + y^2 + 8x - 2y = -12$

$$(x + 4)^2 + (y - 1)^2 = 2.24^2$$

3 $x^2 + 2x + y^2 = 55 + 10y$

$$(x + 1)^2 + (y - 5)^2 = 92$$

5 $x^2 + y^2 + 7x + 8y = -18$

$$(x + 3.5)^2 + (y + 4)^2 = 3.2^2$$

7 Center : (-12, -8)
Radius : 4

$$(x + 12)^2 + (y + 8)^2 = 42$$

9 Center : (-15, $3\sqrt{7}$)
Area : 2π

$$(x + 11)^2 + (y + 14)^2 = 50.24^2$$

11 Center : (-4, -12)
Circumference : 9π

$$(x + 4)^2 + (y + 12)^2 = \left(\frac{9}{2}\right)^2$$

2 $y^2 + 2x + x^2 = 24y - 120$

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

4 $139 + 5y = -y^2 - x^2 - 24x$

$$(x + 12)^2 + (y - 2.5)^2 = 3.35^2$$

6 $x^2 + y^2 + 16x + 2y = -36$

$$(x + 8)^2 + (y + 1)^2 = 5.39^2$$

8 Center : (-6, -15)
Radius : $\sqrt{5}$

$$(x + 6)^2 + (y + 15)^2 = 5$$

10 Center : (-11, -14)
Radius : 16π

$$(x + 15)^2 + (y - 3\sqrt{7})^2 = 2$$

12 Center : (19, 14)
Circumference : $2\pi\sqrt{15}$

$$(x - 19)^2 + (y - 14)^2 = 15$$