

Name : _____

Score : _____ Date : _____

Equation of a Circle Worksheet

- 1 Which of the following is the equation of a circle with center at (0,0) and a radius of 6 units ?
(a) $x + y = 6$ (b) $x^2 + y^2 = 6$ (c) $x^2 + y^2 = 36$ (d) $x^2 - y^2 = 36$
- 2 Which of the following is the equation of a circle with center at (0,0) and a radius of 74 units ?
(a) $x^2 + y^2 = 5476$ (b) $x^2 - y^2 = 74$ (c) $x^2 + y^2 = 74$ (d) $x^2 - y^2 = 5476$
- 3 Which of the following is the equation of a circle with center at (0,0) and a diameter of 28 units ?
(a) $x^2 + y^2 = 28$ (b) $x^2 + y^2 = 784$ (c) $x^2 + y^2 = 14$ (d) $x^2 + y^2 = 196$
- 4 Which of the following is the equation of a circle with center at (0,0) and a diameter of 28 units ?
(a) $x^2 - y^2 = 289$ (b) $x^2 + y^2 = 289$ (c) $x^2 + y^2 = 17$ (d) $x^2 - y^2 = 17$

Write an equation with the given informations

- 5 Center = (2,-4) and Radius = 15
- 6 Center = (5,1) and a point on the circle (8,-2)
- 7 Circle with (5,1) and (3,-1) as the endpoints of the diameter.
- 8 Circle with (5,1) and (3,-1) as the endpoints of the diameter.

Rewrite equation in standard form

- 9 $x^2 + y^2 - 12x + 8y + 32 = 0$
- 10 $x^2 + y^2 + 22x - 22y - 20 = 0$

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Answers

- 1 Which of the following is the equation of a circle with center at (0,0) and a radius of 6 units ?
(a) $x + y = 6$ (b) $x^2 + y^2 = 6$ (c) $x^2 + y^2 = 36$ (d) $x^2 - y^2 = 36$
c
- 2 Which of the following is the equation of a circle with center at (0,0) and a radius of 74 units ?
(a) $x^2 + y^2 = 5476$ (b) $x^2 - y^2 = 74$ (c) $x^2 + y^2 = 74$ (d) $x^2 - y^2 = 5476$
a
- 3 Which of the following is the equation of a circle with center at (0,0) and a diameter of 28 units ?
(a) $x^2 + y^2 = 28$ (b) $x^2 + y^2 = 784$ (c) $x^2 + y^2 = 14$ (d) $x^2 + y^2 = 196$
b
- 4 Which of the following is the equation of a circle with center at (0,0) and a diameter of 28 units ?
(a) $x^2 - y^2 = 289$ (b) $x^2 + y^2 = 289$ (c) $x^2 + y^2 = 17$ (d) $x^2 - y^2 = 17$
b

Write an equation with the given informations

- 5 Center = (2,-4) and Radius = 15
 $(x - 2)^2 + (y + 4)^2 = 225$
- 6 Center = (5,1) and a point on the circle (8,-2)
 $(x - 5)^2 + (y - 1)^2 = 18$
- 7 Circle with (5,1) and (3,-1) as the endpoints of the diameter.
 $(x - 4)^2 + y^2 = 2$
- 8 Circle with (5,1) and (3,-1) as the endpoints of the diameter.
 $(x - 3)^2 + (y + 1)^2 = 5$

Rewrite equation in standard form

- 9 $x^2 + y^2 - 12x + 8y + 32 = 0$
 $(x - 6)^2 + (y + 4)^2 = 4.47^2$
- 10 $x^2 + y^2 + 22x - 22y - 20 = 0$
 $(x + 11)^2 + (y - 11)^2 = 16.19^2$