

G.GPE.A.1: Equations of Circles 3a

- 1 Which equation represents a circle whose center is $(3, -2)$?
 - 1) $(x + 3)^2 + (y - 2)^2 = 4$
 - 2) $(x - 3)^2 + (y + 2)^2 = 4$
 - 3) $(x + 2)^2 + (y - 3)^2 = 4$
 - 4) $(x - 2)^2 + (y + 3)^2 = 4$
- 2 Which equation represents circle O with center $(2, -8)$ and radius 9?
 - 1) $(x + 2)^2 + (y - 8)^2 = 9$
 - 2) $(x - 2)^2 + (y + 8)^2 = 9$
 - 3) $(x + 2)^2 + (y - 8)^2 = 81$
 - 4) $(x - 2)^2 + (y + 8)^2 = 81$
- 3 What is an equation of a circle with its center at $(-3, 5)$ and a radius of 4?
 - 1) $(x - 3)^2 + (y + 5)^2 = 16$
 - 2) $(x + 3)^2 + (y - 5)^2 = 16$
 - 3) $(x - 3)^2 + (y + 5)^2 = 4$
 - 4) $(x + 3)^2 + (y - 5)^2 = 4$
- 4 Which equation represents the circle whose center is $(-2, 3)$ and whose radius is 5?
 - 1) $(x - 2)^2 + (y + 3)^2 = 5$
 - 2) $(x + 2)^2 + (y - 3)^2 = 5$
 - 3) $(x + 2)^2 + (y - 3)^2 = 25$
 - 4) $(x - 2)^2 + (y + 3)^2 = 25$
- 5 What is an equation of a circle with center $(7, -3)$ and radius 4?
 - 1) $(x - 7)^2 + (y + 3)^2 = 4$
 - 2) $(x + 7)^2 + (y - 3)^2 = 4$
 - 3) $(x - 7)^2 + (y + 3)^2 = 16$
 - 4) $(x + 7)^2 + (y - 3)^2 = 16$
- 6 What is the equation of a circle with center $(-3, 1)$ and radius 7?
 - 1) $(x - 3)^2 + (y + 1)^2 = 7$
 - 2) $(x - 3)^2 + (y + 1)^2 = 49$
 - 3) $(x + 3)^2 + (y - 1)^2 = 7$
 - 4) $(x + 3)^2 + (y - 1)^2 = 49$
- 7 What is an equation of the circle with center $(-5, 4)$ and a radius of 7?
 - 1) $(x - 5)^2 + (y + 4)^2 = 14$
 - 2) $(x - 5)^2 + (y + 4)^2 = 49$
 - 3) $(x + 5)^2 + (y - 4)^2 = 14$
 - 4) $(x + 5)^2 + (y - 4)^2 = 49$
- 8 What is an equation of the circle with a radius of 5 and center at $(1, -4)$?
 - 1) $(x + 1)^2 + (y - 4)^2 = 5$
 - 2) $(x - 1)^2 + (y + 4)^2 = 5$
 - 3) $(x + 1)^2 + (y - 4)^2 = 25$
 - 4) $(x - 1)^2 + (y + 4)^2 = 25$

- 9 The equation of a circle with its center at $(-3,5)$ and a radius of 4 is
- 1) $(x+3)^2 + (y-5)^2 = 4$
 - 2) $(x-3)^2 + (y+5)^2 = 4$
 - 3) $(x+3)^2 + (y-5)^2 = 16$
 - 4) $(x-3)^2 + (y+5)^2 = 16$
- 10 What is the equation of a circle with its center at $(5,-2)$ and a radius of 3?
- 1) $(x-5)^2 + (y+2)^2 = 3$
 - 2) $(x-5)^2 + (y+2)^2 = 9$
 - 3) $(x+5)^2 + (y-2)^2 = 3$
 - 4) $(x+5)^2 + (y-2)^2 = 9$
- 11 What is the equation of a circle whose center is 4 units above the origin in the coordinate plane and whose radius is 6?
- 1) $x^2 + (y-6)^2 = 16$
 - 2) $(x-6)^2 + y^2 = 16$
 - 3) $x^2 + (y-4)^2 = 36$
 - 4) $(x-4)^2 + y^2 = 36$
- 12 The center of a circular sunflower with a diameter of 4 centimeters is $(-2,1)$. Which equation represents the sunflower?
- 1) $(x-2)^2 + (y+1)^2 = 2$
 - 2) $(x+2)^2 + (y-1)^2 = 4$
 - 3) $(x-2)^2 + (y-1)^2 = 4$
 - 4) $(x+2)^2 + (y-1)^2 = 2$
- 13 A graphic designer is drawing a pattern of four concentric circles on the coordinate plane. The center of the circles is located at $(-2,1)$. The smallest circle has a radius of 1 unit. If the radius of each of the circles is one unit greater than the largest circle within it, what would be the equation of the fourth circle?
- 1) $(x-2)^2 + (y+1)^2 = 4$
 - 2) $(x+2)^2 + (y-1)^2 = 4$
 - 3) $(x-2)^2 + (y+1)^2 = 16$
 - 4) $(x+2)^2 + (y-1)^2 = 16$
- 14 Write an equation of a circle whose center is $(-3,2)$ and whose diameter is 10.

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Answer Section

- 1 ANS: 2 REF: 060008a
2 ANS: 4 REF: 011212ge
3 ANS: 2 REF: 060910ge
4 ANS: 3 REF: 011010ge
5 ANS: 3 REF: 011116ge
6 ANS: 4 REF: 010514b
7 ANS: 4 REF: 081305ge
8 ANS: 4 REF: 081110ge
9 ANS: 3 REF: 081209ge
10 ANS: 2 REF: 011601ge
11 ANS: 3 REF: 061210ge
12 ANS: 2 REF: 060110b
13 ANS: 4 REF: 010912b
14 ANS:

If $r = 5$, then $r^2 = 25$. $(x + 3)^2 + (y - 2)^2 = 25$

REF: 011332ge