

12-5 Standardized Test Prep

Circles in the Coordinate Plane

Multiple Choice

For Exercises 1-4, choose the correct letter.

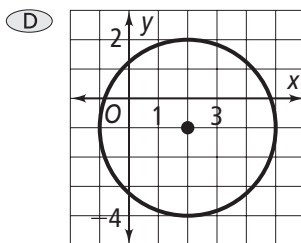
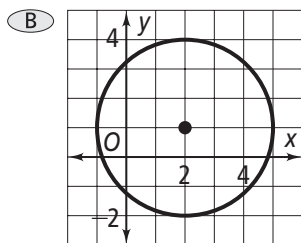
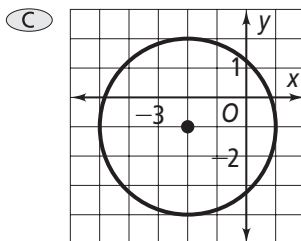
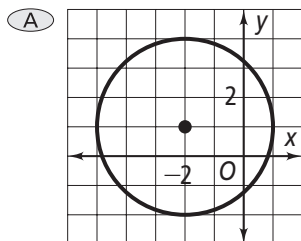
1. Which is the equation of a circle with center $(-2, 3)$ and radius $r = 5$?

(A) $(x + 2)^2 + (y - 3)^2 = 10$ (C) $(x - 2)^2 + (y + 3)^2 = 10$
 (B) $(x + 2)^2 + (y - 3)^2 = 25$ (D) $(x - 2)^2 + (y + 3)^2 = 25$

2. A circle with center $(-1, 2)$ passes through point $(2, -2)$. Which is true?

(F) The radius is $\sqrt{5}$. (H) The equation is $(x + 1)^2 + (y - 2)^2 = 10$.
 (G) The diameter is 10. (I) The circumference is 25π .

3. Which of the following is the graph of $(x - 2)^2 + (y + 1)^2 = 9$?



4. Which is the equation of a circle with diameter \overline{AB} with $A(5, 4)$ and $B(-1, -4)$?

(F) $(x - 5)^2 + (y - 4)^2 = 10$ (H) $(x - 2)^2 + y^2 = 25$
 (G) $(x + 5)^2 + (y + 4)^2 = 100$ (I) $(x + 2)^2 + y^2 = 5$

Short Response

5. Write the standard equation of a circle with a circumference of 14π and center $(4, -1)$. (*Hint: Use the formula for circumference.*)