10-3 Standardized Test Prep
Circles

Multiple Choice

For Exercises 1–5, choose the correct letter.

1. Which is an equation of the circle with center at the origin and radius 3?

   Ⓐ $x^2 + y^2 = 3$ Ⓒ $x^2 + y^2 = 9$

   Ⓑ $x^2 + y^2 = 81$ Ⓓ $(x - 3)^2 + (y - 3)^2 = 9$

2. What is the equation for the translation of $x^2 + y^2 = 16$ two units left and one unit down?

   Ⓕ $x^2 + y^2 = 16$ Ⓗ $2x^2 + y^2 = 16$

   Ⓖ $(x - 2)^2 + (y - 1)^2 = 16$ Ⓘ $(x + 2)^2 + (y + 1)^2 = 16$

3. Which equation represents a circle with a center at $(7, -9)$ and a diameter of 8?

   Ⓐ $(x - 7)^2 + (y - 9)^2 = 64$ Ⓒ $(x - 7)^2 + (y + 9)^2 = 16$

   Ⓑ $(x - 7)^2 + (y + 9)^2 = 64$ Ⓓ $(x + 7)^2 + (y - 9)^2 = 16$

4. What is the center of the circle $(x - 3)^2 + (y + 2)^2 = 81$?

   Ⓕ $(-3, 2)$ Ⓖ $(3, -2)$ Ⓗ $(3, 2)$ Ⓘ $(9, 9)$

5. What is the radius of the circle $(x + 8)^2 + (y - 3)^2 = 100$?

   Ⓐ 10   Ⓑ 20   Ⓒ 50   Ⓓ 100

Short Response

6. What are the radius and center of a circle with the equation
   $(x + 7)^2 + (y - 8)^2 = 144$?