Name: _____

1. The product of $6x^3y^3$ and $2x^2y$ is

   1. $3xy^2$
   2. $8x^5y^5$
   3. $12x^5y^4$
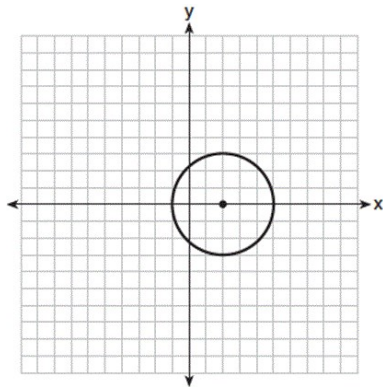   4. $12x^6y^3$

2. The expression $\dfrac{12w^9y^3}{-3w^3y^3}$ is equivalent to

   1. $-4w^6$
   2. $-4w^3y$
   3. $9w^6$
   4. $9w^3$

3. The expression is $\dfrac{\left(10w^3\right)^2}{5w}$ equivalent to

   1. $2w^5$ 2. $2w^8$
   3. $20\ w^5$ 4. $20\ w^8$

4. Which equation represents the circle shown in the graph below?

   1. $(x - 2)^2 + y^2 = 9$
   2. $(x + 2)^2 + y^2 = 9$
   3. $(x - 2)^2 + y^2 = 3$
   4. $(x + 2)^2 + y^2 = 3$

5. A circle whose center has coordinates (-3, 4) passes through the origin. What is the equation of the circle?

   1. $(x + 3)^2 + (y - 4)^2 = 5$
   2. $(x + 3)^2 + (y - 4)^2 = 25$
   3. $(x - 3)^2 + (y + 4)^2 = 5$
   4. $(x - 3)^2 + (y + 4)^2 = 25$

6. The solution set for the equation $b = \sqrt{2b^2 - 64}$ is
   1. $\{-8\}$ 2. $\{8\}$
   3. $\{\pm 8\}$ 4. $\{\ \}$

7. What is the solution set of the equation $\sqrt{5 - x} + 3 = x$?

   1. $\{1\}$ 2. $\{4, 1\}$
   3. $\{\}$ 4. $\{4\}$