Name:_____ Date:_____ Period:_____

Review Unit 4 Test (Polynomial, Exponents)

1. Which is $d^4 \cdot d^6$ in simplified form?

   A. d^2

   B. d^{10}

   C. d^{24}

   D. d^{46}

2. Evaluate: $(8^0)^2$

   A. 64

   B. 8

   C. 1

   D. 0

3. Simplify: $(-2jk)^3 \left(\frac{1}{3j^2 k^5} \right)^2$

   A. $-\frac{8}{9jk^7}$

   B. $-\frac{2}{3jk^7}$

   C. $j^7 k^{13}$

   D. $j^{12} k^{30}$

4. Evaluate: 3^{-2}

   A. -6

   B. $-\frac{1}{9}$

   C. $\frac{1}{9}$

   D. $\frac{1}{6}$

5. Which expression is equivalent to $8(5x^2 - 6y^2)$?

   A. $40x^2 - 6y^2$

   B. $40x^2 - 48y^2$

   C. $5x^2 - 48y^2$

   D. $-8x^2 y^2$

6. Simplify: $7(3 + x) + (5 - 4x)$

   A. $17x + 5$

   B. $11x + 26$

   C. $7x + 26$

   D. $3x + 26$

7. Subtract:

$(4n^4 - 7n^3 + 3n^2 - 6) - (8n^4 - 3n^2 - 8)$

A. $-4n^4 + 6n^2 - 14$

B. $-4n^4 + 7n^3 + 14$

C. $-4n^4 - 7n^3 + 6n^2 + 2$

D. $-4n^4 + 4n^3 + 3n^2 + 2$

8. $(x + 7)(x - 6) =$

A. $x^2 - x - 42$

B. $x^2 + x - 42$

C. $x^2 - 13x - 42$

D. $x^2 + 13x - 42$

9. Which is $4(5 + n) - (2 - 3n) + 6$ in simplest form?

F $n + 24$

G $n + 13$

H $4n + 24$

J $7n + 24$

10. Which is $\dfrac{14m^6 - 21m^4 + 7m^2}{7m^2}$ in simplest form?

A $2m^3 - 3m^2$

B $2m^4 - 3m^2$

C $2m^3 - 3m^2 + 1$

D $2m^4 - 3m^2 + 1$

11. Which is equivalent to $\dfrac{x^3 y^2}{(-3x^2 y^{-3})^3}$?

A $-\dfrac{y^{11}}{27x^3}$

B $-\dfrac{x^3 y^7}{27}$

C $\dfrac{27y^{11}}{x^3}$

D $27x^3 y^{11}$

12. Which is equivalent to $\left(\dfrac{2}{3}\right)^{-4}$?

A $-\dfrac{12}{8}$

B $-\dfrac{8}{12}$

C $\dfrac{16}{81}$

D $\dfrac{81}{16}$

13. The area of a billboard sign is represented by $(X+15)^2$ feet. Find its product.

14. In little league, Mary throws a softball $(4b^2)$ times every day. How many times does she throw the ball in $(2b^3)$ days?

15. The length of a rectangular room is 5 more than twice times the width. Find the perimeter.

16. Find the total area of the figure if the shaded region $8x^2-7$ is the area of the total region and $4x^2-2$ is the area of the unshaded region.