

Write the letter for the correct answer in the blank at the right of each question.

- Simplify $(5d^3)(-2d^2)$.
 A. $10d^5$ B. $-10d^5$ C. $10d^6$ D. $-10d^6$ 1. _____
- Simplify $(m^4)^2$.
 A. $6m$ B. m^8 C. m^6 D. $2m^4$ 2. _____
- Simplify $(-2xy^2)^4(2x^3y^4)^2$.
 A. $4x^{24}y^{32}$ B. $-8x^9y^6$ C. $64x^{10}y^{16}$ D. $-4x^{10}y^{16}$ 3. _____
- Simplify $\frac{a^{12}}{a^4}$. Assume the denominator is not equal to zero.
 A. a^3 B. a^{16} C. a^{48} D. a^8 4. _____
- Simplify $\frac{6n^{-3}y}{2n^{-1}y^{-3}}$. Assume the denominator is not equal to zero.
 A. $\frac{4y^3}{n^2}$ B. $\frac{3y^4}{n^2}$ C. $\frac{3}{n^4y^2}$ D. $\frac{3n^2}{y^4}$ 5. _____
- Simplify $\frac{(a^{-2}b^4)^{-6}}{(a^4b^{-8})^3}$. Assume the denominator is not equal to zero.
 A. ab^3 B. 1 C. $\frac{a^{24}}{b^{48}}$ D. $\frac{b^{48}}{a^{24}}$ 6. _____
- Express 5.43×10^{-4} in standard notation.
 A. 54,300 B. 0.00543 C. 5430 D. 0.000543 7. _____
- Evaluate $\frac{2.88 \times 10^3}{2.4 \times 10^{-7}}$.
 A. 0.48×10^{-4} B. 1.2×10^{-4} C. 1.2×10^{10} D. 0.48×10^{10} 8. _____
- Find the degree of the polynomial $2x^3y - 4xy^2 + 9x^3y^2$.
 A. 4 B. 3 C. 12 D. 5 9. _____
- Arrange the terms of $x^2y^3 + 4xy^2 - 3x^3y + 6$ so that the powers of x are in ascending order.
 A. $6 + 4xy^2 + x^2y^3 - 3x^3y$ B. $x^2y^3 - 3x^3y + 4xy^2 + 6$
 C. $6 + 4xy^2 - 3x^3y + x^2y^3$ D. $6 - 3x^3y + 4xy^2 + x^2y^3$ 10. _____
- Find $(3c^2 - 8c + 5) + (c^2 - 8c - 6)$.
 A. $3c^2 - 1$ B. $4c^2 + 11$ C. $4c^2 - 16c - 1$ D. $2c^2 - 16c - 1$ 11. _____

Chapter 8 Test, Form 2B (continued)

12. **CLUBS** The number of girls in a local 4-H club is modeled by the expression $4n^2 - n + 52$ where n is the number of years after 1990. The number of girls in 4H who are age 8 and under is modeled by the expression $n^2 + 13$. Find an expression that models the number of girls older than 8 in the club.
- A. $3n^2 + n - 39$ B. $3n^2 - n + 39$
 C. $-3n^2 - n - 39$ D. $-3n^2 + n + 39$ 12. _____
13. Simplify $3b^2(4b + 7) - 2b(b^2 - 5b - 3) - 6(b - 2)$.
- A. $14b^3 + 11b^2 - 12b - 12$ B. $41b^2 + 12$
 C. $14b^3 + 31b^2 + 12b + 12$ D. $10b^3 + 31b^2 + 12$ 13. _____
14. Find $(x + 2)(x + 4)$.
- A. $x^2 + 8$ B. $x^2 + 2x + 6$
 C. $x^2 + 2x + 8$ D. $x^2 + 6x + 8$ 14. _____
15. Find $(3x + 2)(4x^2 - 2x - 7)$.
- A. $12x^3 + 2x^2 - 25x - 14$ B. $12x^3 + 14x^2 + 25x + 14$
 C. $7x^3 + 9x^2 - 25x - 14$ D. $7x^3 + 7x^2 - 4x - 5$ 15. _____
16. Find $(3y + 4z)(3y - 4z)$.
- A. $9y^2 - 16z^2$ B. $9y^2 - 24yz - 16z^2$
 C. $9y^2 + 16z^2$ D. $9y^2 - 24yz + 16z^2$ 16. _____
17. Find $(-2r^2 + s)^2$.
- A. $4r^4 + s^2$ B. $4r^4 - 4r^2s + s^2$
 C. $-4r^4 + s^2$ D. $-4r^4 - 4r^2s + s^2$ 17. _____
18. Solve $-4(5 - 2n) = 8(-6 - 5n)$.
- A. $-\frac{1}{9}$ B. $-\frac{28}{3}$ C. $-\frac{7}{8}$ D. $-\frac{7}{12}$ 18. _____
19. Solve $x(x + 3) - 2 = 2 + x(x + 1)$.
- A. 2 B. -2 C. 1 D. 0 19. _____
20. **ART** A picture is 4 inches longer than it is wide. It is surrounded by a mat that is 2 inches wide. The total area of the mat is 112 square inches. If w is the width of the picture, which equation is true?
- A. $(w + 4)(w + 8) + w(w + 4) = 112$
 B. $(w + 2)(w + 6) - w(w + 4) = 112$
 C. $(w + 4)(w + 8) - w(w + 4) = 112$
 D. $(w + 2)(w + 6) + w(w + 4) = 112$ 20. _____

Bonus Simplify $3^{2n-1} \cdot 3^{5n}$. B: _____

8 Assessment Answer Key

Form 2B

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1. B

12. B

2. B

13. D

3. C

14. D

4. D

15. A

5. B

16. A

6. B

17. B

7. D

18. D

8. C

19. A

9. D

20. C

10. A

B: 3^{7n-1}

11. C

Answers