

**Algebra 1**  
**Practice Chapter 7 Test**

NAME KEY

You MAY write on this test. Keep your eyes on your own paper. Write the letter for the best answer. (3 Points each)

1. Simplify  $(3x^3)(5x^4)$

- A.  $8x^7$       B.  $8x^{12}$       C.  $15x^7$       D.  $12x^{12}$

2. Simplify  $(4x^3y^6)(-6x^9y^5)$

- A.  $-2x^{12}y^{11}$       B.  $-2x^{27}y^{40}$       C.  $-24x^{12}y^{11}$       D.  $-24x^{27}y^{40}$

3. Simplify  $(3x^5)^4$

- A.  $12x^9$       B.  $12x^{20}$       C.  $81x^9$       D.  $81x^{20}$

4. Simplify  $\frac{x^9y^3}{x^4y^7}$

- A.  $\frac{x^5}{y^4}$       B.  $\frac{x^{13}}{y^{10}}$       C.  $\frac{xy^{12}}{xy^{11}}$       D.  $\frac{y^{27}}{x^{28}}$

5. Simplify  $\left(\frac{3x^4}{2y^5}\right)^3$

$\frac{27x^{12}}{8y^{15}}$

- A.  $\frac{9x^{12}}{6y^{15}}$       B.  $\frac{9x^7}{6y^8}$       C.  $\frac{27x^7}{8y^8}$       D.  $\frac{27x^{12}}{8y^{15}}$

6. Simplify  $\frac{(x^4y^2)^5}{(xy^4)^2}$

$\frac{x^{20}y^{10}}{x^2y^8}$

- A.  $\frac{x^{22}}{y^{18}}$       B.  $\frac{x^{11}}{y^{13}}$       C.  $x^{18}y^2$       D.  $\frac{x^7}{y}$

7. Simplify  $\frac{x^{-3}y^{-6}}{x^{-2}y^{-8}}$

- A.  $\frac{y^2}{x}$       B.  $\frac{x^5}{y^{14}}$       C.  $\frac{y^{-14}}{x^{-5}}$       D.  $\frac{y^{48}}{x^6}$

8. Simplify  $\frac{(x^2y^3)^{-2}}{(x^5y)^{-3}}$

$\frac{x^{-4}y^{-6}}{x^{-15}y^{-3}}$

- A.  $\frac{y^3}{x^{11}}$       B.  $\frac{x^{11}}{y^6}$       C.  $\frac{x^{11}}{y^3}$       D.  $\frac{x^{11}}{y^4}$

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
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Points(24) \_\_\_\_\_

9. Find the degree of the polynomial  $6x^4 + 3x^6 - 7$

- A. 0      B. 1      C. 4      D. 6

10. Find the degree of the polynomial  $3x^5y^4 - 7x^3y^5 + 8xy^6$

- A. 6      B. 7      C. 8      D. 9

11. Express 954,000 in scientific notation.

- A.  $9.54 \times 10^5$     B.  $9.54 \times 10^6$     C.  $9.54 \times 10^{-5}$     D.  $9.54 \times 10^{-6}$

9. \_\_\_\_\_

12. Express .00000954 in scientific notation.

- A.  $9.54 \times 10^5$     B.  $9.54 \times 10^6$     C.  $9.54 \times 10^{-5}$     D.  $9.54 \times 10^{-6}$

10. \_\_\_\_\_

13. Write  $x^3 - 5 + 6x^4 + 3x$  in standard form.

- A.  $6x^4 + 3x + x^3 - 5$       B.  $6x^4 - 5 + 3x + x^3$   
C.  $-5 + 3x + x^3 + 6x^4$       D.  $6x^4 + x^3 + 3x - 5$

11. \_\_\_\_\_

12. \_\_\_\_\_

13. \_\_\_\_\_

14. Find  $(4x + 9y) + (6x - 7y)$

- A.  $24x - 63y$     B.  $24x + 63y$     C.  $10x - 2y$     D.  $10x + 2y$

14. \_\_\_\_\_

15. \_\_\_\_\_

15. Find  $(5x - 2y) - (3x - y)$

- A.  $2x - 3y$     B.  $-2x + 3y$     C.  $2x - y$     D.  $-2x - 3y$

16. \_\_\_\_\_

17. \_\_\_\_\_

16. Simplify  $3(x^2 + 2x) - x(x + 1)$   $3x^2 + 6x - x^2 - x$

- A.  $4x^2 + x$     B.  $2x^2 + 7x$     C.  $2x^2 + 3x$     D.  $2x^2 + 5x$

17. Kara and Jordan are both saving money to buy a car. The equations below represent the amount of money each saves in  $m$  months. Which equation would represent the total amount of money  $T$  both girls have saved?

$K = 2,500 + 125m$     +     $J = 1,750 + 180m$

- A.  $T = 4,250 + 305m$       B.  $T = 1,875 + 260m$   
C.  $T = 2,680 + 305m$       D.  $T = 3,250 + 205m$

Points(27) \_\_\_\_\_

18. Solve  $4(3n - 1) = -2(n - 5)$   $12n - 4 = -2n + 10$   
 $14n = 14$   
 A. 4      B.  $\frac{7}{5}$       C. -3      D. 1

19. Solve  $5(n - 9) = 11 + 4(2n - 2)$   $5n - 45 = 11 + 8n - 8$   
 $-48 = 3n$   
 A. -16      B. 16      C. -23      D. 23

20. Solve  $-3(5 - n) = 5(-2 - 4n)$   $-15 + 3n = -10 - 20n$   
 $23n = 5$   
 A.  $\frac{25}{23}$       B.  $\frac{5}{23}$       C.  $\frac{5}{17}$       D.  $\frac{25}{17}$

21. Solve  $x(x - 4) - 3 = 3 + x(x + 2)$   $x^2 - 4x - 3 = 3 + x^2 + 2x$   
 $-6 = 6x$   
 A. 2      B. -2      C. 1      D. -1

22. Find  $(x + 6)(x + 3)$  FOIL  
 A.  $x^2 + 3x + 18$       B.  $9x^2 + 18$   
 C.  $x^2 + 18$       D.  $x^2 + 9x + 18$

23. Find  $(x + 3)(x - 4)$   
 A.  $x^2 - 7x - 12$       B.  $x^2 - x - 12$   
 C.  $x^2 - 12$       D.  $x^2 + x - 12$

24. Find  $(2x - 6)(3x + 4)$   
 A.  $6x^2 - 18x - 24$       B.  $6x^2 - 10x - 24$   
 C.  $6x^2 - 24$       D.  $6x^2 + 18x - 24$

25. Find  $(4x - 1)(3x - 5)$   
 A.  $12x^2 - 23x + 5$       B.  $12x^2 - 17x + 5$   
 C.  $12x^2 + 5$       D.  $12x^2 + 23x + 5$

26. Find  $(2x + 6)^2$  FOIL  $(2x+6)(2x+6)$   
 A.  $4x^2 + 36$       B.  $4x^2 - 24x + 36$   
 C.  $4x^2 - 36$       D.  $4x^2 + 24x + 36$

- 18. \_\_\_\_\_
- 19. \_\_\_\_\_
- 20. \_\_\_\_\_
- 21. \_\_\_\_\_
- 22. \_\_\_\_\_
- 23. \_\_\_\_\_
- 24. \_\_\_\_\_
- 25. \_\_\_\_\_
- 26. \_\_\_\_\_

Points(27) \_\_\_\_\_

27. Find  $(5x - 4)(5x + 4)$

A.  $25x^2 + 16$

C.  $25x^2 - 16$

B.  $25x^2 + 40x - 16$

D.  $25x^2 - 40x - 16$

28. Find  $(5x + 4)(3x - 8)$

A.  $8x^2 + 4x - 4$

C.  $15x^2 - 28x - 32$

B.  $8x^2 - 20x - 4$

D.  $15x^2 - 52x - 32$

29. Find  $(4x - 4)(3x - 7)$

A.  $12x^2 - 40x - 28$

C.  $12x^2 + 40x + 28$

B.  $12x^2 - 40x + 28$

D.  $12x^2 + 40x - 28$

30. Find  $(4x - 5y)(3x + 3y)$

A.  $20x^2 - 3xy - 15y^2$

C.  $20x^2 - 27xy - 15y^2$

B.  $20x^2 + 3xy - 15y^2$

D.  $20x^2 + 27xy - 15y^2$

31. Find  $(3x + 4y)(6x - y)$

A.  $18x^2 + 21xy - 4y^2$

C.  $18x^2 + 21xy + 4y^2$

B.  $18x^2 - 4y^2$

D.  $18x^2 - 21xy - 4y^2$

32. Find  $(3x + 2)(x^2 - 3x + 1)$

A.  $3x^3 - 11x^2 - 3x + 2$

C.  $3x^3 - 7x^2 - 3x + 2$

B.  $3x^3 - 7x^2 + 3x + 2$

D.  $3x^3 - 7x^2 - 3x + 3$

33. Find  $(2x^2 + 3x + 4)(x^2 - 3x + 2)$

A.  $2x^4 + 3x^3 + x^2 - 6x + 8$

C.  $2x^4 - 3x^3 + x^2 - 6x + 8$

B.  $2x^4 + 3x^3 - x^2 - 6x + 8$

D.  $2x^4 - 3x^3 - x^2 - 6x + 8$

27. \_\_\_\_\_

28. \_\_\_\_\_

29. \_\_\_\_\_

30. \_\_\_\_\_

31. \_\_\_\_\_

32. \_\_\_\_\_

33. \_\_\_\_\_

Points(21) \_\_\_\_\_