Scientific Notation

Name: _____ Date: _____

Convert each number from scientific notation to real.

(1) 4.815×10^{3}

(2) 1.789×10^{-6}

(3) 1.485×10^{-5}

(4) 4.216×10^{5}

(5) 7.996×10^{6}

(6) 7.652×10^{6}

(7) 9.199×10^{1}

(8) 7.724×10^{-3}

(9) 9.413×10^{4}

(10) 9.944×10^{5}

Convert each number from real to scientific notation.

(11) 0.03358

(12) 0.07443

(13) 0.009661

(14) 792,600

(15) 9,815,000

(16) 0.02537

(17) 0.06231

(18) 0.00001466

(19) 52,510

(20) 51.79

Name _____ Date _____ Class _____

SECTION 1A **Ready to Go On? Quiz** continued

1-4 Applying Exponents

Multiply.

17. $775 \cdot 10^4$ **18.** $0.13 \cdot 10^6$ **19.** $5.357 \cdot 10^2$ **20.** $86.25 \cdot 10^7$

_____ _____ _____ _____

Write each number in scientific notation.

21. 38,000,000 **22.** 14,500 **23.** 4,700,000 **24.** 397,000

_____ _____ _____ _____

25. The earth is about 150,000,000 kilometers from the sun. Write this distance in scientific notation. _____

1-5 Order of Operations

Simplify each expression.

26. $(10 + 4) - 6 + 4^2$ _____ **27.** $35 - 4 \cdot 9 + 5^3$ _____

28. $(3 \cdot 7) + 6 \cdot 4 - 17$ _____ **29.** $10^2 \div 5^2 + (28 - 13)$ _____

30. $5(7 - 3)^3 + 2^4$ _____ **31.** $2(6 + 8) \div (4^2 - 9)$ _____

1-6 Properties

Name the property you should use to simplify each expression.

32. 7(35) **33.** 64 • 1 **34.** 4 + 59 + 36 **35.** (4 • 9) • 25

_____ _____ _____ _____

Simplify each expression using mental math.

36. $(88 + 0) + (12 \cdot 1)$ _____ **37.** 6(49) _____

38. $(14 + 9) + 6$ _____ **39.** 8(23) _____

40. $2 \cdot (5 \cdot 16)$ _____ **41.** $3 + 89 + 17$ _____

Name _____ Date _____ Class _____

SECTION 1B

Ready to Go On? Quiz

1-7 Variables and Algebraic Expressions

Evaluate each expression for the given value of the variable.

1. $6x - 14$ for $x = 5$ _____

2. $3r^2 \div 12$ for $r = 4$ _____

3. $(9 + k) \cdot 8$ for $k = 1$ _____

4. $4(y \div 3)$ for $y = 15$ _____

5. $n^3 - 35$ for $n = 6$ _____

6. $4pt$ for $p = 3$ and $t = 5$ _____

7. $9 - x + t$ for $x = 3$ and $t = 10$ _____

8. $4q^2 - (m \div 3)$ for $q = 7$ and $m = 33$ _____

1-8 Translate Words into Math

Write each phrase as an algebraic expression.

9. the product of a number and 7 _____

10. add 25 to a number _____

11. a number decreased by 6 _____

12. the quotient of a number and 5 _____

13. 3 times a number _____

14. take away 14 from a number _____

15. Sarah was 116 cm tall when she started to measure her height. She grows an average of 3 cm each month. Write an algebraic expression to show Sarah's height after h months.

_____

1-9 Simplifying Algebraic Expressions

Simplify each expression.

16. $6x - 7 + 3x - 7x$

_____

17. $3y^3 + 3y^2 + y^2 - 8$

_____

18. $5 - 6b + a + b$

_____

19. $2h + 10 - 5h + 7g + 3g$

_____

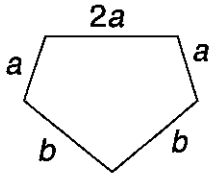
20. $5r^2 - 34 + 100 + 3r^2$

_____

21. $10 - 4h - 5h - 2h$

_____

22. Write an expression for the perimeter of the figure. Then simplify the expression.



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Name _____ Date _____ Class _____

SECTION 1B

Ready to Go On? Quiz continued

1-10 Equations and Their Solutions

Determine whether each number is a solution for the given equation.

23. $4x = 16$; 4 _____ **24.** $a - 3 = 4$; 8 _____ **25.** $17 + y = 24$; 8 _____

26. $5r = 20$; 3 _____ **27.** $29 - t = 13$; 16 _____ **28.** $n \div 2 = 12$; 24 _____

29. Maria ran 37 miles last month. This month, she ran 8 more miles than last month. Did Maria run 29 miles or 45 miles? _____

1-11 Addition and Subtraction Equations

Solve each equation.

30. $3 + p = 26$ _____ **31.** $7 - r = 5$ _____ **32.** $t - 9 = 25$ _____

33. $y + 7 = 15$ _____ **34.** $f + 14 = 30$ _____ **35.** $46 - c = 31$ _____

36. $89 - h = 56$ _____ **37.** $g - 27 = 18$ _____ **38.** $e + 23 = 60$ _____

1-12 Multiplication and Division Equations

Solve each equation.

39. $4y = 24$ _____ **40.** $r \div 7 = 6$ _____ **41.** $30 \div t = 6$ _____

42. $7k = 63$ _____ **43.** $3f = 33$ _____ **44.** $\frac{h}{4} = 8$ _____

45. $169 = 13n$ _____ **46.** $\frac{45}{x} = 9$ _____ **47.** $8p = 96$ _____

48. Nicole has 36 trading cards that she wants to divide equally among her friends. If each friend gets nine cards, how many friends does Nicole have? _____