Name _____ Date _____

CHAPTER 2 Cumulative Review

For use after Chapter 2

Evaluate the expression when $x = 3$ and $y = -5$. *(Lessons 1.1, 2.3)*

1. $7x - 2$ **2.** $y - x$ **3.** $2x - y$ **4.** $x^2 - (3 + y)$

Evaluate the expression. *(Lesson 1.2)*

5. $8 - 9 \div 3 + 2^2$ **6.** $\frac{17 - 13}{3^2 - 1}$ **7.** $42 - [(5^2 + 3^3) \div 4]$

Write an algebraic expression, equation, or inequality. *(Lesson 1.3, 1.4)*

8. The difference of three times a number x and 4

9. 11 less than the product of 8 and a number y

10. The sum of a number x and 15 is 7.

11. 7 times a number y is less than the number y squared.

Check whether 3 is a solution of the equation or inequality. *(Lesson 1.5)*

12. $12 + 4x = 19$ **13.** $x^2 - 7 \leq 12$ **14.** $12x - 5 > 3x^2 + 5$

15. **Boarding Fees** A dog kennel's boarding fees are \$11.50 per night for a small dog and \$13.75 per night for a large dog. First write an algebraic expression for the total income from boarding fees. Then find the total income if 7 small dogs and 5 large dogs were boarded for the night.

Write a rule for the function. Identify the domain and the range. *(Lesson 1.6)*

16.

Input, *x*	5	6	7	8	9
Output, *y*	1	2	3	4	5

17.

Input, *x*	0	2	4	6	8
Output, *y*	0	1	2	3	4

18. Graph the function $y = 3x + 1$ with domain 0, 1, 2, 3, and 4. *(Lesson 1.7)*

Order the numbers in the list from least to greatest. *(Lesson 2.1, 2.7)*

19. $-\frac{1}{3}, 0, 1.5, -0.6, \frac{1}{2}$ **20.** $3.2, -\sqrt{8}, -3.5, \sqrt{9}, -\sqrt{4}$

Name _____ Date _____

CHAPTER 2

Cumulative Review *continued*

For use after Chapter 2

For the given value of x, find $-x$ and $|x|$. *(Lesson 2.1)*

21. $x = -21$

22. $x = -0.75$

23. $x = \frac{2}{7}$

Find the sum, difference, product, or quotient. *(Lessons 2.2, 2.3, 2.4, 2.6)*

24. $-8 + (-7)$

25. $1.3 + (-2.7)$

26. $11 - 15$

27. $-3.8 - 7.3$

28. $0.4 - (-0.8)$

29. $-\frac{7}{16} - \left(-\frac{3}{8}\right)$

30. $-6(11)$

31. $12\left(-\frac{1}{2}\right)$

32. $(-35)\left(-\frac{1}{5}\right)$

33. $-42 \div (-7)$

34. $-18 \div \frac{2}{3}$

35. $\frac{9}{28} \div \left(-\frac{3}{4}\right)$

Identify the property being illustrated. *(Lesson 2.2, 2.4)*

36. $5.7 + (-5.7) = 0$

37. $[7 + (-9)] + (-3) = 7 + [(-9) + (-3)]$

38. $-7 \cdot 1 = -7$

39. $-8 \cdot 9 = 9 \cdot (-8)$

Simplify the expression. *(Lesson 2.5, 2.6)*

40. $-6(x + 9)$

41. $(y - 11)(-3y)$

42. $\frac{9(z - 6)}{2}$

43. $8x + 3(5x - 4)$

44. $\frac{1}{4}(12y - 2) + 9y$

45. $\frac{-21z + 7}{7}$

Find the mean of the numbers. *(Lesson 2.6)*

46. $15, -7, -11$

47. $12, -8, 9, -5$

Rewrite the conditional statement in if-then form. Then tell whether the statement is *true* or *false*. If the statement is false, give a counterexample. *(Lesson 2.7)*

48. All irrational numbers are real numbers.

49. All integers are whole numbers.

Evaluate the expression. *(Lesson 2.7)*

50. $-\sqrt{144}$

51. $\pm\sqrt{36}$

52. $\sqrt{16}$

53. $-\sqrt{361}$

REVIEW AND PROJECT