

**CHAPTER
3****Cumulative Review***For use after Chapter 3***Evaluate the expression.** (*Lessons 1.1, 1.2, 2.1*)

1. $2^3 - 3 \cdot 5^2$

2. $(17 - 8) - (5 - 7)$

3. $7[(9 + 6) \div 3]$

4. $m^2 - 8$ when $m = 7$

5. $21 - n$ when $n = 13$

6. $2p^2 - 5$ when $p = 3$

7. $-q$ when $q = -3$

8. $|r|$ when $r = -12$

9. $-3s - 2$ when $s = -6$

Write an algebraic expression, an equation, or an inequality.*(Lessons 1.3, 1.4)*10. The difference of 3 times a number x and 11.11. The quotient of a number y squared and 6 is greater than or equal to 20.12. The sum of 17 and twice a number z is 32.13. **Newsstand** A newsstand buys newspapers for \$.75 each and magazines for \$2.99 each. Write an algebraic expression for the total cost of the newsstand's stock. Then find the total cost of 30 newspapers and 20 magazines. (*Lesson 1.5*)**Write a rule for the function.** (*Lesson 1.6*)

14.

Input, x	15	17	21	22
Output, y	6	8	12	13

15.

Input, x	1	2	3	4
Output, y	-3	-6	-9	-12

Tell whether the number is a real number, a rational number, an irrational number, an integer, or a whole number. (*Lessons 2.1, 2.7*)

16. $\sqrt{28}$

17. $-\frac{2}{5}$

18. -5

19. 1.2

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

20. $-13 - 8$

21. $2.8 + (-5.3)$

22. $12.2 - (-6.7)$

23. $-\frac{3}{10} + \frac{2}{5}$

24. $-6(4)$

25. $-0.5(-18)$

26. $-\frac{1}{7}(-21)(-2)$

27. $24 \div (-8)$

28. $-26 \div \left(-\frac{13}{17}\right)$

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

29. $-8(m + 2)$

30. $4(-2x + 1) - 3x$

31. $\frac{15x - 40}{-5}$

32. $\frac{-6x + 21}{-3}$

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Solve the equation. Check your solution. (Lessons 3.1, 3.2, 3.3, 3.4)

33. $\frac{x}{7} = -9$

34. $2y - 7 = 5$

35. $47 = -4z - 2z - 7$

36. $\frac{7}{8}(a - 8) = 14$

37. $3.1b - 7 = 2.8b + 8$

38. $-8(2c - 5) = -5(3c + 7)$

Solve the proportion. Check your solution. (Lessons 3.5, 3.6)

39. $\frac{7}{8} = \frac{21}{-2p}$

40. $\frac{7m - 6}{6} = \frac{16}{12}$

41. $\frac{4}{7} = \frac{-3w + 2}{-2w}$

42. **Maps** A map has a scale of 1 in. : 5 mi. The distance on the map between two cities is 11.5 inches. Estimate the actual distance between the cities. (Lesson 3.6)

Use the percent equation to answer the question. (Lesson 3.7)

43. What percent of 65 is 13?

44. 162 is what percent of 450?

45. What number is 12% of 140?

46. What percent of 144 is 151.2?

47. **Survey** In a school cell phone survey of 375 students, 210 of the students surveyed said they own a cell phone. What percent of the students surveyed own a cell phone? (Lesson 3.7)

Write the equation in function form. (Lesson 3.8)

48. $6x + 2y = 24$

49. $5x - y = 7$

50. $7x - 8 = 4y - 3x$

51. **Suitcase** The volume V of the suitcase is given by the formula $V = \ell wh$ where ℓ is the length, w is the width, and h is the height. (Lesson 3.8)

a. Solve the formula for ℓ .

b. Use the rewritten formula to find the length of the suitcase shown.

