

right.

- Consider the conversion $1 \text{ meter} = 39.37 \text{ inches}$. How many inches are in a kilometer? (Hint: A kilometer is equal to 1,000 meters)
- Yanni's motorcycle travels 108 miles/hour . $1 \text{ mph} = 0.44704 \text{ meters/second}$. How many meters did Yanni travel in 45 seconds?
- The area of a rectangle is given by the formula $A = l(w)$. A rectangle has an area of 132 square centimeters and a length of 11 centimeters. What is the perimeter of the rectangle?
- The surface area of a cube is given by the formula: $\text{Surface Area} = 6x^2$, where $x = \text{side of the cube}$. Determine the surface area of a die with a 1-inch side length.

Mixed Review

- Write the ratio in simplest form: 14:21.
- Write the ratio in simplest form: 55:33.
- Solve for a : $\frac{15a}{36} = \frac{45}{12}$.
- Solve for x : $\frac{4x+5}{5} = \frac{2x+7}{7}$.
- Solve for y : $4(x-7) + x = 2$.
- What is 24% of 96?
- Find the sum: $4\frac{2}{5} - (-\frac{7}{3})$.

Chapter 3 Review

Solve for the variable.

- $a + 11.2 = 7.3$
- $9.045 + j = 27$
- $11 = b + \frac{5}{7}$
- $-22 = -3 + k$
- $-9 = n - 6$
- $-6 + l = -27$
- $\frac{s}{2} = -18$
- $29 = \frac{e}{27}$
- $u \div -66 = 11$
- $-5f = -110$
- $76 = -19p$
- $-h = -9$
- $\frac{q+1}{11} = -2$
- $-2 - 2m = -22$
- $-5 + \frac{d}{6} = -7$
- $32 = 2b - 3b + 5b$
- $9 = 4h + 14h$
- $u - 3u - 2u = 144$
- $2i + 5 - 7i = 15$
- $-10 = t + 15 - 4t$
- $\frac{1}{2}k - 16 + 2\frac{1}{2}k = 0$
- $\frac{-1543}{120} = \frac{3}{5}x + \frac{11}{4}(-\frac{11}{5}x + \frac{8}{5})$

23. $-0.44x + 0.11(1.5x + 2) = -0.599t + 0.8x$

24. $-5(5r + 7) = 25 + 5r$

25. $-7p + 37 = 2(-6p + 1)$

26. $3(-5y - 4) = -6y - 39$

27. $5(a - 7) + 2(a - 3(a - 5)) = 0$

Write the following comparisons as ratios. Simplify when appropriate.

28. 10 boys to 25 students

29. 96 apples to 42 pears

30. \$600 to \$900

31. 45 miles to 3 hours

Write the following as a unit rate.

32. \$4.99 for 16 ounces of turkey burger

33. 40 computers to 460 students

34. 18 teachers to 98 students

35. 48 minutes to 15 appointments

Solve the proportion.

36. Solve for n : $-\frac{6}{n-7} = -\frac{2}{n+1}$.

37. Solve for x : $-\frac{9}{5} = \frac{x-7}{x+10}$.

38. Solve for b : $\frac{5b}{12} = \frac{3}{11}$.

39. Solve for n : $-\frac{12}{n} = \frac{5}{2n+6}$.

Write the decimal as a percent.

40. 0.4567

41. 2.01

42. 0.005

43. 0.043

Write each percent as a decimal.

44. 23.5%

45. 0.08%

46. 0.025%

47. 125.4%

Write each percent as a fraction.

48. 78%

49. 11.2%

50. 10.5%

51. $33.\bar{3}\%$

Solve using the Percent Equation.

52. 32.4 is 45% of what number?
53. 58.7 is what percent of 1,000?
54. What is 12% of 78?
55. The original price is \$44 and the mark-up is 20%. What is the new price?
56. An item originally priced \$240 has a 15% discount. What is the new price?
57. A pair of shoes originally priced \$89.99 is discounted to \$74.99. What is the percent of mark-down?
58. A salon's haircut rose in price from \$10 to \$14. What is the percent of mark-up?
59. An item costing c dollars decreased \$48, resulting in a 30% mark-down. What was the original price?
60. The width of a rectangle is 15 units less than its length. The perimeter of the rectangle is 98 units. What is the rectangle's length?
61. George took a cab from home to a job interview. The cab fare was \$4.00 plus \$0.25 per mile. His total fare was \$16.75. How many miles did he travel?
62. The sum of twice a number and 38 is 124. What is the number?
63. The perimeter of a square parking lot is 260 yards. What are the dimensions of the parking lot?
64. A restaurant charges \$3.79 for $\frac{1}{8}$ of a pie. At this rate, how much does the restaurant charge for the entire pie?
65. A 60-watt light bulb consumes 0.06 *kilowatts/hour* of energy. How long was the bulb left on if it consumed 5.56 *kilowatts/hour* of energy?
66. A $6\frac{1}{2}$ -foot-tall car casts a 33.2-foot shadow. Next to the car is an elephant casting a 51.5-foot shadow. How tall is the elephant?
67. Two cities are 87 miles apart. How far would they be on a map with a scale of 5 *inches* : 32 *miles*?

Chapter 3 Test

1. School lunch rose from \$1.60 to \$2.35. What was the percent of mark-up?
2. Solve for c : $\frac{3c}{8} = 11$.
3. Write 6.35 as a percent.
4. Write the following as a simplified ratio: 85 tomatoes to 6 plants.
5. Yvonne made 12 more cupcakes than she did yesterday. She made a total of 68 cupcakes over the two days. How many cupcakes did she make the second day?
6. A swing set 8 feet tall casts a 4-foot-long shadow. How long is the shadow of a lawn gnome 4 feet tall?
7. Solve the proportion: $\frac{v}{v-2} = -\frac{9}{5}$.
8. Find the distance between Owosso and Perry if they are 16 cm on a map with a scale of 21 *km* : 4 *cm*.
9. Solve for j : $-\frac{13}{4} - \frac{3}{2} \left(\frac{3}{4}j - \frac{4}{5} \right) = -\frac{14}{5}$.
10. Solve for m : $2m(2 - 4) + 5m(-8) = 9$.
11. Job A pays \$15 plus \$2.00 per hour. Job B pays \$3.75 per hour. When will the two jobs pay exactly the same?
12. Solve for k : $9.0604 + 2.062k = 0.3(2.2k + 5.9)$.
13. Solve for a : $-9 - a = 15$.
14. 46 tons is 11% of what?
15. 17% of what is 473 meters?
16. Find the percent of change from 73 to 309.
17. JoAnn wants to adjust a bread recipe by tripling its ingredients. If the recipe calls for $4\frac{1}{3}$ cups of pastry flour, how much should she use?
18. A sweater originally marked \$80.00 went on sale for \$45. What was the percent of change?