Change the following decimals to fractions, and reduce to lowest terms.

50. 0.75 _____

51. 0.0005 _____

52. 0.04 _____

Answers on p. 43

POINTS TO REMEMBER

- Read decimals carefully.
- When the decimal fraction is **not** preceded by a whole number (e.g., .12), **always place a "0"** to the left of the decimal (0.12) to avoid interpretation errors and to avoid overlooking the decimal point.
- Never follow a whole number with a decimal point and zero. This could result in a medication error because of misinterpretation (e.g., 3, not 3.0).
- Add zeros to the right as needed for making decimals of equal spacing for addition and subtraction. These zeros do not change the value. Eliminate unnecessary zeros at the end in the final answer.
- Adding zeros at the end of a decimal (except when called for to create decimals of equal length for addition or subtraction) can result in error (e.g., 1.5, not 1.50).
- Adding zeros before the decimal point can change the value (e.g., 1.5 is not equal to 1.05, nor is it the same number).
- To convert a fraction to a decimal, divide the numerator by the denominator.
- To convert a decimal to a fraction, write the decimal number as a whole number in the numerator and the denominator as a power of 10. Reduce to lowest terms (e.g., $0.05 = {}^{5}/_{100} = {}^{1}/_{20}$).
- Double-check work to avoid errors.

CHAPTER REVIEW

Identify the decimal with the largest value in the following sets.

1. 0.4, 0.44, 0.444 _____

2. 0.8, 0.7, 0.12 _____

3. 1.32, 1.12, 1.5 _____

4. 0.1, 0.05, 0.2 _____

5. 0.725, 0.357, 0.125 _____

Arrange the following decimals from smallest to largest.

6. 0.5, 0.05, 0.005 _____

7. 0.123, 0.1023, 1.23 _____

8. 0.64, 4.6, 0.46 _____

9. 5.15, 5.05, 5.55 _____

10. 0.73, 0.307, 0.703 _____

Perform the indicated operations. Give exact answers.

11. $3.005 + 4.308 + 2.47 =$ _____

12. $20.3 + 8.57 + 0.03 =$ _____

13. $5.886 - 3.143 =$ _____

14. $8.17 - 3.05 =$ _____

15. $3.8 - 1.3 =$ _____

Solve the following. Carry division to the hundredths place where necessary.

16. $5.7 \div 0.9 =$ _____

17. $3.75 \div 2.5 =$ _____

18. $1.125 \div 0.75 =$ _____

19. $0.15 \times 100 =$ _____

20. $15 \times 2.08 =$ _____

21. $472.4 \times 0.002 =$ _____

Express the following decimals to the nearest tenth.

22. 1.75 _____ 23. 0.13 _____

Express the following decimals to the nearest hundredth.

24. 1.427 _____ 25. 0.147 _____

Change the following fractions to decimals. Carry division three decimal places as necessary.

26. $\frac{8}{64}$ _____ 28. $6\frac{1}{2}$ _____

27. $\frac{3}{50}$ _____

Change the following decimals to fractions, and reduce to lowest terms.

29. 1.01 _____ 30. 0.065 _____

Add the following decimals.

31. You are to give a client one tablet labeled 0.15 milligram (mg) and one labeled 0.025 mg. What is the total dosage of these two tablets? _____

32. If you administer two tablets labeled 0.04 milligram (mg), what total dosage will you administer? _____

33. You have two tablets, one labeled 0.025 milligram (mg) and the other 0.1 mg. What is the total dosage of these two tablets? _____

34. You have just administered 3 tablets with dose strength of 1.5 milligrams (mg) each. What was the total dosage? _____

35. If you administer two tablets labeled 0.6 milligram (mg), what total dosage will you administer? _____

Multiply the following numbers by moving the decimal.

36. $0.08 \times 10 =$ _____ 37. $2.34 \times 10 =$ _____

Divide the following numbers, and round to the nearest hundredth.

38. $0.13 \div 0.25 =$ _____ 40. $5 \div 14.3 =$ _____

39. $4 \div 4.1 =$ _____

Round the following decimals to the nearest thousandth.

41. 4.2475 _____ 43. 7.8393 _____

42. 0.5673 _____ 44. 5.8333 _____

45. A client's water intake is 1.05 liters (L), 0.65 L, 2.05 L, and 0.8 L. What is the total intake in liters? _____

46. A client's creatinine level on admission was 2.5 milligrams per deciliter (mg/dL). By discharge the creatinine level dropped 0.9 mg. What is the client's current creatinine level? _____

47. A baby weighed 4.85 kilograms (kg) at birth and now weighs 7.9 kg. How many kilograms did the baby gain? _____

48. A client is taking $\frac{1}{15}$ of a liquid medication containing 0.375 milligram (mg) of medication every day. How many milligrams will the client take in 4 days? _____

49. A client's sodium intake at one meal was the following: 0.002 gram (g), 0.35 g. How many grams of sodium did the client consume? _____

50. True or False? 2.4 grams (g) = 2.04 g. _____

51. 0.7 milligrams (mg) of a medication has been ordered. The recommended maximum dosage of the medication is 0.35 mg, and the minimum recommended dosage is 0.175 mg. Is the dosage ordered within the allowable limits? _____

52. A client weighed 186.4 pounds (lb) before getting sick. After a lengthy recovery period, the client weighed 167.6 lb. How much weight did the client lose? _____

53. If a dosage of medication is 2.5 milliliters (mL), how much medication is needed for 25 dosages? _____

54. A client received 17.5 milligrams (mg) of a medication in tablet form. Each tablet contained 3.5 mg of medication. How many tablets were given to the client? _____

55. A client received a total of 4.5 grams (g) of a medication. If the client received the total over a 3-day period and was given 3 doses per day, what was the strength of each dose? _____

56. A client is brought to the emergency room with a body temperature of 95.3° F. If the normal body temperature is 98.6° F, how far below normal was the client's temperature? _____

57. A vial holds a total of 7.5 milliliters (mL) of medication. If two injections are withdrawn from the vial (1.6 mL and 0.8 mL), how much medication is left in the vial? _____

58. One dose of flu vaccine is 0.5 milliliter (mL). How much vaccine is needed to vaccinate 30 walk-ins at a clinic? _____

59. A client's hemoglobin was 13.8 grams (g) before surgery. During surgery, the hemoglobin dropped 4.5 g. What was the hemoglobin value after it dropped? _____

60. For a certain medication, the safe dosage should be greater than or equal to 0.7 gram (g) but less than or equal to 2 g. Which of the following dosages fall within the range? (More than one answer is correct.)

    0.8 g, 0.25 g, 2.5 g, 1.25 g

61. In a 24-hour period, a premature infant drank 5.5 milliliters (mL), 15 mL, 5.25 mL, 15 mL, 6 mL, and 12.5 mL. How many mL did the infant drink in 24 hours? _____

62. A baby weighed 3.7 kilograms (kg) at birth. The baby now weighs 5.65 kg. How many kg did the baby gain? _____

63. A client receives a dosage of 5.5 milliliters (mL) of medication 4 times a day. How much medication would the client receive in 7 days? _____

64. A client received 17.5 milligrams (mg) of medication in tablet form. Each tablet contains 2.5 mg of medication. How many tablets were given to the client? _____

65. The doctor prescribed 1.5 tablets of a medication to be administered to a client 4 times a day for 7 days. How many tablets were prescribed? _____

Answers below

ANSWERS

Chapter 3

Answers to Practice Problems

1. eight and thirty-five hundredths
2. eleven and one thousandth
3. four and fifty-seven hundredths
4. five and seven ten thousandths
5. ten and five tenths
6. one hundred sixty-three thousandths

7. 0.4
8. 84.07
9. 0.07
10. 2.23
11. 0.05
12. 0.009
13. 0.5
14. 2.87
15. 0.375
16. 0.175
17. 7.35
18. 0.087
19. 18.4
20. 40.449
21. 3.95
22. 3.87
23. 2.92
24. 43.1
25. 0.035
26. 5.88
27. 0.04725
28. 0.9125
29. 9,650
30. 1.78
31. 100.8072
32. 4
33. 1.16
34. 70.88
35. 30.46
36. 0.59
37. 3.6
38. 1
39. 2
40. 3.55
41. 0.61
42. 0.74
43. 0.0005
44. 0.00004
45. 584
46. 500
47. 0.75
48. 0.555
49. 0.5
50. $\frac{3}{4}$
51. $\frac{1}{2000}$
52. $\frac{1}{25}$

Answers to Chapter Review

1. 0.444
2. 0.8
3. 1.5
4. 0.2
5. 0.725
6. 0.005, 0.05, 0.5
7. 0.1023, 0.123, 1.23
8. 0.46, 0.64, 4.6
9. 5.05, 5.15, 5.55
10. 0.307, 0.703, 0.73
11. 9.783
12. 28.9
13. 2.743
14. 5.12
15. 2.5
16. 6.33
17. 1.5
18. 1.5
19. 15
20. 31.2
21. 0.9448
22. 1.8
23. 0.1
24. 1.43
25. 0.15
26. 0.125
27. 0.06
28. 6.5
29. $1\frac{1}{100}$
30. $\frac{13}{200}$
31. 0.175 mg
32. 0.08 mg
33. 0.125 mg
34. 4.5 mg
35. 1.2 mg
36. 0.8
37. 23.4
38. 0.52
39. 0.98
40. 0.35
41. 4.248
42. 0.567
43. 7.839
44. 5.833
45. 4.55 L
46. 1.6 mg/dL
47. 3.05 kg
48. 0.1 mg
49. 0.352 g
50. False
51. No, 0.7 mg is outside the allowable limits of the safe dosage range of 0.175 mg to 0.35 mg. It is twice the allowable maximum dosage.
52. 18.8 lb
53. 62.5 mL
54. 5 tablets
55. 0.5 g per dose
56. 3.3° F
57. 5.1 mL
58. 15 mL
59. 9.3 g
60. 0.8 g, 1.25 g
61. 59.25 mL
62. 1.95 kg
63. 154 mg
64. 7 tablets
65. 42 tablets