

Diagnostic Test

1.1 Find the answers.

$$\begin{array}{r} 1. \quad 81,652 \\ \quad 32,971 \\ + \quad 3,500 \\ \hline \end{array}$$

$$2. \quad 14.2 + 1.279$$

$$3. \quad 60.942 + 25$$

$$\begin{array}{r} 4. \quad 7,400 \\ \quad - 4,826 \\ \hline \end{array}$$

$$5. \quad 254 - 26.7$$

$$6. \quad 348.9 - 287.954$$

$$\begin{array}{r} 7. \quad 421 \\ \times 85 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 2.429 \\ \times 53 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 54.34 \\ \times 0.47 \\ \hline \end{array}$$

$$10. \quad 22 \overline{)11,594}$$

$$11. \quad 38 \overline{)262.58}$$

$$12. \quad 15.2 \overline{)189.544}$$

1.3–1.4 Factor each number using division by primes. Write the prime factorization using exponents.

$$13. \quad 120$$

$$14. \quad 189$$

$$15. \quad 400$$

1.5 Multiply or divide by powers of 10.

$$16. \quad 65 \times 100$$

$$17. \quad 0.0241 \times 1,000$$

$$18. \quad 72,381 \div 10$$

$$19. \quad 1.325 \div 10,000$$

$$20. \quad 6.47 \times 100$$

$$21. \quad 34.2 \div 1,000$$

1.6 Simplify using order of operations.

22. $3 \times 4 + 10 \div 2$

23. $4(3 - 2) + 9$

24. $3 \times 5^2 - 20 + 5$

1.7–1.8 Find the (a) GCF and (b) LCM for each group of numbers.

25. 44 and 12

(a) GCF = _____

(b) LCM = _____

26. 15, 20, and 45

(a) GCF = _____

(b) LCM = _____

1.9 Write an equivalent fraction with the given denominator.

27. $\frac{3}{8} = \frac{?}{24}$

28. $\frac{27}{15} = \frac{?}{30}$

29. $\frac{11}{13} = \frac{?}{52}$

1.9 Reduce each fraction to lowest terms.

30. $\frac{18}{40}$

31. $\frac{15}{100}$

32. $\frac{24}{42}$

1.10 Find the answers.

33.
$$\begin{array}{r} \frac{5}{8} \\ + \frac{7}{8} \\ \hline \end{array}$$

34.
$$\begin{array}{r} 4\frac{1}{2} \\ + 3\frac{1}{4} \\ \hline \end{array}$$

35.
$$\begin{array}{r} \frac{5}{6} \\ + \frac{7}{10} \\ \hline \end{array}$$

36.
$$\begin{array}{r} 18\frac{7}{42} \\ - 9\frac{12}{42} \\ \hline \end{array}$$

37.
$$\begin{array}{r} 5\frac{4}{9} \\ - 2\frac{3}{4} \\ \hline \end{array}$$

38. $\frac{7}{8} \times \frac{2}{3}$

39. $7\frac{1}{5} \times 4\frac{3}{8}$

40. $\frac{3}{10} \div \frac{1}{5}$

41. $\frac{1}{8} \div 2$