

Chapter 1—Fractions and Decimals

PROBLEM

Complete the following.

1. Arrange the following decimals from *largest* to *smallest*: 1.5, 0.25, 1.025.

ANS:

1.5, 1.025, 0.25

PTS: 1

DIF: Knowledge

REF: Decimals

2. Arrange the following decimals from *largest* to *smallest*: 0.33, 0.045, 0.7.

ANS:

0.7, 0.33, 0.045

PTS: 1

DIF: Knowledge

REF: Decimals

3. Arrange the following fractions from *smallest* to *largest*: $\frac{3}{16}$, $\frac{3}{20}$, $\frac{3}{4}$.

ANS:

$\frac{3}{20}$, $\frac{3}{16}$, $\frac{3}{4}$

PTS: 1

DIF: Knowledge

REF: Fractions

4. Arrange the following fractions from *smallest* to *largest*: $\frac{7}{16}$, $\frac{3}{16}$, $\frac{5}{16}$.

ANS:

$\frac{3}{16}$, $\frac{5}{16}$, $\frac{7}{16}$

PTS: 1

DIF: Knowledge

REF: Fractions

Perform the indicated operations. Reduce fractions in answers to lowest terms.

5. $5\frac{5}{6} + 7\frac{1}{3}$

ANS:

$5\frac{5}{6} + 7\frac{1}{3} = 5\frac{5}{6} + 7\frac{2}{6} = 12\frac{7}{6} = 13\frac{1}{6}$

PTS: 1

DIF: Comprehension

REF: Adding Fractions

6. $2\frac{1}{2} \div \frac{3}{4}$

ANS:

$$2\frac{1}{2} \div \frac{3}{4} = \frac{5}{2} \div \frac{3}{4} = \frac{5}{\cancel{2}^1} \times \frac{\cancel{4}^2}{3} = \frac{10}{3} = 3\frac{1}{3}$$

PTS: 1

DIF: Comprehension

REF: Division of Fractions

7. $8\frac{5}{12} - 3\frac{3}{4}$

ANS:

$$8\frac{5}{12} - 3\frac{3}{4} = 8\frac{5}{12} - 3\frac{9}{12} = 7\frac{17}{12} - 3\frac{9}{12} = 4\frac{8}{12} = 4\frac{2}{3}$$

PTS: 1

DIF: Comprehension

REF: Subtracting Fractions

8. $\frac{\frac{3}{4}}{\frac{5}{8}}$

ANS:

$$\frac{\frac{3}{4}}{\frac{5}{8}} = \frac{3}{4} \div \frac{5}{8} = \frac{3}{\cancel{4}^1} \times \frac{\cancel{8}^2}{5} = \frac{6}{5} = 1\frac{1}{5}$$

PTS: 1

DIF: Comprehension

REF: Division of Fractions

Perform the following computations. If the questions do not have a whole number as the answer, compute to the third decimal place, and round to the second decimal place.

9. $16.7 + 53 + 5.85 + 0.028$

ANS:

$$\begin{array}{r} 16.700 \\ 53.000 \\ 5.850 \\ +0.028 \\ \hline 75.578 \end{array}$$

or 75.58 (rounded)

PTS: 1

DIF: Comprehension

REF: Addition and Subtraction of Decimals

10. 2.7×0.02

ANS:

$$\begin{array}{r} 2.7 \\ \times 0.02 \\ \hline 0.054 \\ \text{or } 0.05 \text{ (rounded)} \end{array}$$

PTS: 1

DIF: Comprehension

REF: Multiplying Decimals

11. $\$91 - \5.83

ANS:

$$\begin{array}{r} \$91.00 \\ -5.83 \\ \hline \$85.17 \end{array}$$

PTS: 1

DIF: Comprehension

REF: Addition and Subtraction of Decimals

12. $735 \div 1.05$

ANS:

$$\begin{array}{r} 700 \\ 1.05 \overline{) 735.00} \\ \underline{735} \\ 000 \end{array}$$

PTS: 1

DIF: Comprehension

REF: Dividing Decimals

13. Convert the following decimal to a fraction and reduce to lowest terms.

0.09

ANS:

$$0.09 = \frac{9}{100}$$

PTS: 1

DIF: Comprehension

REF: Conversion between Fractions and Decimals

14. Convert the following decimal to a fraction and reduce to lowest terms.

0.175

ANS:

$$0.175 = \frac{175}{1,000} = \frac{7}{40}$$

PTS: 1

DIF: Application

REF: Conversion between Fractions and Decimals

15. Convert the following fraction to a decimal and round to the nearest hundredth.

$$\frac{2}{7}$$

ANS:

$$\frac{2}{7} = 0.285 = 0.29$$

PTS: 1

DIF: Application

REF: Conversion between Fractions and Decimals

16. Convert the following fraction to a decimal and round to the nearest tenth.

$$\frac{3}{8}$$

ANS:

$$\frac{3}{8} = 0.375 = 0.4$$

PTS: 1

DIF: Application

REF: Conversion between Fractions and Decimals

17. Perform the indicated operation.

$$3\frac{1}{3} + 5\frac{2}{3}$$

ANS:

$$3\frac{1}{3} + 5\frac{2}{3} = 8\frac{3}{3} = 9$$

PTS: 1

DIF: Comprehension

REF: Addition and Subtraction of Fractions

18. Perform the indicated operation.

$$6.3 \times 100$$

ANS:

$$6.3 \times 100 = 630$$

PTS: 1

DIF: Comprehension

REF: Multiplying Decimals

19. Perform the indicated operation and round the answer to the tenths place.

$$52.7 \times 14$$

ANS:

$$52.7 \times 14 = 737.8$$

PTS: 1

DIF: Application

REF: Multiplying Decimals

20. Perform the indicated operation and round the answer to the nearest tenths place.

$$123.56 \times 78$$

ANS:

$$123.56 \times 78 = 9,637.68 = 9,637.7$$

PTS: 1

DIF: Application

REF: Multiplying Decimals

21. Perform the indicated operation.

$$350 \div 0.07$$

ANS:

$$350 \div 0.07 = 5,000$$

PTS: 1

DIF: Comprehension

REF: Dividing Decimals

22. Perform the indicated operation.

$$25 \div 0.4$$

ANS:

$$25 \div 0.4 = 62.5$$

PTS: 1

DIF: Comprehension

REF: Dividing Decimals

23. Perform the indicated operation and reduce to the lowest terms.

$$\frac{5}{7} \times \frac{3}{5}$$

ANS:

$$\frac{5}{7} \times \frac{3}{5} = \frac{15}{35} = \frac{3}{7}$$

PTS: 1

DIF: Application

REF: Multiplying Fractions

24. Perform the indicated operation and reduce to the lowest term.

$$7\frac{1}{3} - 4\frac{1}{5}$$

ANS:

$$7\frac{1}{3} - 4\frac{1}{5} = 7\frac{5}{15} - 4\frac{3}{15} = 3\frac{2}{15}$$

PTS: 1

DIF: Application

REF: Addition and Subtraction of Fractions

25. Perform the indicated operation and reduce to lowest term.

$$4\frac{1}{3} \div \frac{1}{3}$$

ANS:

$$4\frac{1}{3} \div \frac{1}{3} = \frac{13}{3} \div \frac{1}{3} = \frac{13}{3} \times \frac{3}{1} = \frac{39}{3} = 13$$

PTS: 1 DIF: Application REF: Division of Fractions

26. Convert 0.45 to a fraction in the lowest terms.

ANS:

$$\frac{45}{100} = \frac{9}{20}$$

PTS: 1 DIF: Application REF: Conversion between Fractions and Decimals

27. Convert 0.125 to a fraction in the lowest terms.

ANS:

$$\frac{125}{1000} = \frac{1}{8}$$

PTS: 1 DIF: Application REF: Conversion between Fractions and Decimals

28. Convert $\frac{4}{8}$ to a decimal.

ANS:

$$4 \div 8 = 0.5$$

PTS: 1 DIF: Comprehension
REF: Conversion between Fractions and Decimals

29. Convert $\frac{5}{8}$ to a decimal and round to the nearest hundredths place.

ANS:

$$5 \div 8 = 0.625 = 0.63$$

PTS: 1 DIF: Application REF: Conversion between Fractions and Decimals

30. Find the least common denominator for the following pair of fractions.

$$\frac{3}{11}, \frac{2}{3}$$

ANS:

$$\text{LCD} = 33$$

PTS: 1 DIF: Comprehension
REF: Reducing Fractions to Lowest Terms

31. Find the least common denominator for the following pair of fractions.

$$\frac{5}{6}, \frac{2}{5}$$

ANS:

$$\text{LCD} = 30$$

PTS: 1 DIF: Comprehension

REF: Reducing Fractions to Lowest Terms

32. Perform the indicated operation and reduce to the lowest terms.

$$\frac{4}{7} + \frac{5}{4} =$$

ANS:

$$\frac{4}{7} + \frac{5}{4} = \frac{16}{28} + \frac{35}{28} = \frac{51}{28} = 1 \frac{23}{28}$$

PTS: 1

DIF: Application

REF: Addition and Subtraction of Fractions

33. Perform the indicated operation and reduce to lowest terms.

$$\frac{2}{4^5} - 2 \frac{1}{2} =$$

ANS:

$$\frac{2}{4^5} - 2 \frac{1}{2} = \frac{44}{10} - \frac{25}{10} = \frac{19}{10} = 1 \frac{9}{10}$$

PTS: 1

DIF: Application

REF: Addition and Subtraction of Fractions

34. After surgery, a patient drinks $2 \frac{1}{2}$ ounces of clear liquids every 2 hours. How many ounces will the patient drink in 8 hours?

ANS:

$$2 \frac{1}{2} \times 4 = \frac{5}{2} \times \frac{4}{1} = \frac{20}{2} = 10 \text{ ounces}$$

PTS: 1

DIF: Application

REF: Multiplying Fractions