



Answer Key

GRADE 5 • MODULE 4

Multiplication and Division of Fractions and Decimal Fractions

Lesson 1

Problem Set

1. Answers will vary.
2. Answers will vary.
3. Answers will vary.
4. Answers will vary.
5.
 - a. Answers will vary.
 - b. Answers will vary.
 - c. Answers will vary.

Exit Ticket

1. Line plot drawn correctly.
2. Answers will vary.

Homework

1. Line plot drawn correctly.
 - a. Location 6
 - b. Locations 1, 7, and 10
 - c. $\frac{1}{8}$ in
 - d. 5 in

Lesson 2

Problem Set

1.
 - a. Answer provided.
 - b. $12 \text{ fourths} \div 4 = 3 \text{ fourths} = \frac{3}{4}$
 - c. $24 \text{ fourths} \div 4 = 6 \text{ fourths} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$
2. $3 \div 2 = 6 \text{ halves} \div 2 = 3 \text{ halves} = \frac{3}{2} = 1\frac{1}{2}$
3.
 - a. Solutions illustrated correctly.
 - b. Answers will vary.
4.
 - a. $\frac{2}{3}$
 - b. $\frac{15}{8}$
 - c. $\frac{11}{4}$
 - d. $3 \div 2$
 - e. $9 \div 13$
 - f. $4 \div 3$

Exit Ticket

1.
 - a. $27 \text{ ninths} \div 9 = 3 \text{ ninths} = \frac{3}{9} = \frac{1}{3}$; picture representing $3 \div 9$ drawn
 - b. $12 \text{ thirds} \div 3 = 4 \text{ thirds} = \frac{4}{3} = 1\frac{1}{3}$; picture representing $4 \div 3$ drawn
2.
 - a. $\frac{21}{8}$
 - b. $7 \div 4$
 - c. $\frac{4}{9}$
 - d. $9 \div 7$

Homework

1.
 - a. $4 \text{ fourths} \div 4 = 1 \text{ fourth} = \frac{1}{4}$; picture representing $1 \div 4$ drawn
 - b. $15 \text{ fifths} \div 5 = 3 \text{ fifths} = \frac{3}{5}$; picture representing $3 \div 5$ drawn
 - c. $28 \text{ fourths} \div 4 = 7 \text{ fourths} = \frac{7}{4} = 1 \frac{3}{4}$; picture representing $7 \div 4$ drawn
2. $4 \div 6 = 24 \text{ sixths} \div 6 = 4 \text{ sixths} = \frac{4}{6} = \frac{2}{3}$; picture representing $4 \div 6$ drawn
3.
 - a. $\frac{2}{7}$
 - b. $\frac{39}{5}$
 - c. $\frac{13}{3}$
 - d. $9 \div 5$
 - e. $19 \div 28$
 - f. $8 \div 5$

Lesson 3

Problem Set

1.
 - a. Answer provided
 - b. 6 halves; 3 halves; $\frac{3}{2}$, algorithm answered correctly
 - c. 6, 4; $\frac{6}{4}$; $1\frac{1}{2}$; algorithm answered correctly
 - d. 10 halves $\div 2 = 5$ halves; algorithm answered correctly
2.
 - a. $\frac{3}{4}$; answers will vary.
 - b. 3; answers will vary.
3.
 - a. 4; answers will vary.
 - b. $\frac{4}{5}$

Exit Ticket

$9 \div 4$; 36 fourths $\div 4 = 9$ fourths; $\frac{9}{4} = 2\frac{1}{4}$; picture drawn representing 9 wholes or 36 fourths, divided by 4

Homework

1.
 - a. Answer provided
 - b. $7 \div 5$; 35 fifths $\div 5 = 7$ fifths; $\frac{7}{5}$
 - c. $7 \div 2$; 14 halves $\div 2 = 7$ halves; $\frac{7}{2}$; $3\frac{1}{2}$
 - d. 28 fourths $\div 4 = 7$ fourths; $1\frac{3}{4}$
2.
 - a. 3; explanations will vary.
 - b. 7
3.
 - a. 4; explanations will vary.
 - b. $\frac{1}{2}$; 2

Lesson 4

Problem Set

1.
 - a. Answer provided
 - b. $\frac{2}{3}$; tape diagram drawn correctly
 - c. $1\frac{2}{5}$; tape diagram drawn correctly
 - d. $2\frac{4}{5}$; tape diagram drawn correctly
2.
 - a. Answer provided
 - b. $\frac{6}{7}$; algorithm completed correctly
 - c. 55,10; 5 and 6; algorithm completed correctly
 - d. 32,40; 0 and 1; algorithm completed correctly
3.
 - a. 80 cents
 - b. 20 cents; explanations will vary
4.
 - a. $\frac{1}{4}$
 - b. $1\frac{1}{4}$; tape diagram drawn correctly
 - c. 60 oz

Exit Ticket

- $2\frac{1}{4}$; tape diagram drawn correctly

Homework

1.
 - a. Answer provided
 - b. $\frac{4}{5}$; tape diagram drawn correctly
 - c. $\frac{8}{5}$; tape diagram drawn correctly
 - d. $\frac{14}{3}$; tape diagram drawn correctly
2.
 - a. Answer provided
 - b. 3, 4; algorithm completed correctly
 - c. 7, 2; 3 and 4; algorithm completed correctly
 - d. 81, 90; 0 and 1; algorithm completed correctly
3.
 - a. $\frac{2}{5}$ yd; tape diagram drawn correctly
 - b. $1\frac{1}{5}$ ft; tape diagram drawn correctly
4. $4\frac{2}{3}$ lb
5. $\frac{2}{3}$ lb

Lesson 5

Problem Set

1. $\frac{2}{5}$ yd
2. $\frac{4}{6}$ or $\frac{2}{3}$ pt
3. $\frac{6}{4}$ or $1\frac{1}{2}$; tape diagram drawn showing $6 \div 4$
4. a. $\frac{4}{8}$ or $\frac{1}{2}$
b. $\frac{1}{8}$
5. $\frac{5}{40}$ or $\frac{1}{8}$
6. a. $\frac{4}{10}$ or $\frac{2}{5}$ L
b. 0.4 L
c. 400 mL
7. a. $4\frac{2}{3}$ mi; tape diagram drawn showing $14 \div 3$
b. 14 mi

Exit Ticket

- a. $\frac{5}{9}$ yd; tape diagram drawn showing $5 \div 9$
- b. $1\frac{1}{9}$ yd

Homework

1. a. $3\frac{2}{4}$ or $3\frac{1}{2}$ gal
b. $10\frac{1}{2}$ gal; explanations will vary.
c. $7\frac{2}{4}$ or $7\frac{1}{2}$ sq. ft
d. $\frac{1}{4}$
2. a. $\frac{1}{4}$; models will vary.
b. $\frac{3}{4}$ ft
c. 9 in
3. \$7.50

Lesson 6

Sprint

Side A

- | | | | |
|--------------------|--------------------|--------------------|--------------------|
| 1. $\frac{1}{2}$ | 12. $1\frac{2}{5}$ | 23. 3 | 34. $2\frac{1}{6}$ |
| 2. $\frac{1}{3}$ | 13. $1\frac{4}{5}$ | 24. $3\frac{1}{2}$ | 35. $4\frac{2}{7}$ |
| 3. $\frac{1}{8}$ | 14. $\frac{2}{3}$ | 25. 1 | 36. $3\frac{3}{8}$ |
| 4. 1 | 15. 1 | 26. $1\frac{1}{8}$ | 37. $5\frac{4}{9}$ |
| 5. $\frac{2}{3}$ | 16. $1\frac{1}{4}$ | 27. $1\frac{7}{8}$ | 38. $4\frac{5}{6}$ |
| 6. 1 | 17. $1\frac{3}{4}$ | 28. 2 | 39. $6\frac{5}{7}$ |
| 7. $\frac{3}{4}$ | 18. 2 | 29. $2\frac{3}{4}$ | 40. $6\frac{5}{8}$ |
| 8. $\frac{3}{10}$ | 19. $2\frac{1}{2}$ | 30. $7\frac{1}{2}$ | 41. $7\frac{4}{9}$ |
| 9. $\frac{3}{5}$ | 20. 2 | 31. $4\frac{4}{5}$ | 42. $9\frac{5}{6}$ |
| 10. 1 | 21. $2\frac{1}{5}$ | 32. $4\frac{1}{4}$ | 43. $7\frac{7}{8}$ |
| 11. $1\frac{1}{5}$ | 22. $2\frac{3}{5}$ | 33. $6\frac{2}{3}$ | 44. $7\frac{8}{9}$ |

Side B

- | | | | |
|--------------------|---------------------|--------------------|--------------------|
| 1. $\frac{1}{3}$ | 12. 1 | 23. 3 | 34. $3\frac{1}{6}$ |
| 2. $\frac{1}{4}$ | 13. $1\frac{1}{2}$ | 24. $3\frac{1}{5}$ | 35. $4\frac{3}{7}$ |
| 3. $\frac{1}{10}$ | 14. $\frac{4}{5}$ | 25. 1 | 36. $4\frac{5}{8}$ |
| 4. 1 | 15. 1 | 26. $1\frac{1}{6}$ | 37. $5\frac{5}{9}$ |
| 5. $\frac{5}{6}$ | 16. $1\frac{1}{10}$ | 27. $1\frac{5}{6}$ | 38. $2\frac{5}{6}$ |
| 6. 1 | 17. $1\frac{3}{10}$ | 28. 2 | 39. $6\frac{6}{7}$ |
| 7. $\frac{3}{7}$ | 18. 2 | 29. $2\frac{2}{3}$ | 40. $6\frac{3}{8}$ |
| 8. $\frac{3}{10}$ | 19. $2\frac{1}{5}$ | 30. $6\frac{1}{2}$ | 41. $7\frac{5}{9}$ |
| 9. $\frac{3}{4}$ | 20. $2\frac{3}{5}$ | 31. $4\frac{3}{5}$ | 42. $8\frac{5}{6}$ |
| 10. 1 | 21. 2 | 32. $3\frac{3}{4}$ | 43. $7\frac{5}{8}$ |
| 11. $1\frac{1}{4}$ | 22. $2\frac{1}{2}$ | 33. $4\frac{3}{4}$ | 44. $7\frac{7}{9}$ |

Problem Set

1.
 - a. 3; 6; 9
 - b. 5; 10; 15
 - c. 4; 16; 5
 - d. 3; 9; 12; 18; 21
2. 8; drawings will vary.
3. Explanations and pictures will vary.
4. 12
5. 15 ten dollar bills or \$150

Exit Ticket

1.
 - a. 4
 - b. 12
2. 12

Homework

1.
 - a. 4; 8; 12
 - b. 5; 10; 15; 20
 - c. 7; 14; 21; 28; 35; 42
2. 12; drawings will vary.
3. Explanations and pictures will vary.
4. 8
5.
 - a. 24 or 2 dozen
 - b. \$45

Lesson 7

Problem Set

1. Tape diagram drawn accurately
 - a. 6
 - b. 12
 - c. 18
 - d. 9
 - e. 20
 - f. 20
 - g. $2\frac{1}{4}$
 - h. $4\frac{4}{5}$
 - i. 15
 - j. 32
2. Tape diagram drawn accurately
 - a. 36
 - b. 140 degrees
 - c. \$72
 - d. $3\frac{1}{5}$ more ounces

Exit Ticket

Tape diagram drawn accurately

- a. 18
- b. 50
- c. 16

Homework

1. Tape diagram drawn accurately
 - a. 6
 - b. 12
 - c. 12
 - d. 6
 - e. 21
 - f. 36
 - g. $10\frac{1}{3}$
 - h. 8
 - i. $6\frac{1}{4}$
 - j. $18\frac{3}{4}$
 - k. 36
 - l. 35
2. Tape diagram drawn accurately
 - a. 22
 - b. 150 degrees
 - c. $4\frac{2}{8}$ or $4\frac{1}{4}$ more ounces
 - d. 84

Lesson 8

Problem Set

1. Explanations will vary.
2. Modeling will vary.
 - a. $\frac{21}{4}$
 - b. $\frac{28}{5}$
 - c. $\frac{12}{7}$
3. Modeling will vary.
 - a. 4
 - b. 6
4. Modeling will vary.
 - a. 6
 - b. 27
 - c. 39
 - d. 36
5.
 - a. 30
 - b. 45
 - c. 300
 - d. 80

Exit Ticket

Modeling will vary.

- a. 10
- b. 15

Homework

1. Modeling will vary.
 - a. $\frac{15}{3}$ or 5
 - b. $\frac{26}{5}$
 - c. $\frac{27}{4}$
2. Modeling will vary.
 - a. 12
 - b. 16
 - c. 44
 - d. 42
 - e. 15
 - f. $7\frac{1}{2}$
 - g. $23\frac{1}{3}$
3.
 - a. 20
 - b. 48
 - c. 700
 - d. 60

Lesson 9

Problem Set

1. Explanations will vary.
 - a. Answer provided.
 - b. 4
 - c. 10
 - d. 80
 - e. 40
 - f. 27
2. 3
3.
 - a. 14
 - b. 12
 - c. 2
 - d. Mr. Paul; 2
4. $12\frac{1}{2}$

Exit Ticket

1. $\frac{3}{5}$
2.
 - a. 8
 - b. 40
 - c. 10

Homework

1. Explanations will vary.
 - a. Answer provided
 - b. 2
 - c. 9
 - d. 60
 - e. 25
 - f. 24
2. 9
3.
 - a. 12
 - b. 10
 - c. 2
 - d. Mr. Phillips; 6
4. $6\frac{1}{4}$; $3\frac{3}{4}$

Lesson 10

Problem Set

1. $5\frac{2}{3}$; expressions will vary.
 $3\frac{3}{10}$; expressions will vary.
2. a. 6; expressions will vary.
b. $2\frac{2}{3}$; expressions will vary.
c. $3\frac{1}{4}$; expressions will vary.
d. 14; expressions will vary.
e. $26\frac{2}{3}$; expressions will vary.
f. $10\frac{2}{3}$; expressions will vary.
3. $(4 \times 7) \div 5$, $4 \times \frac{7}{5}$, and $7 \times \frac{4}{5}$ circled;
explanations will vary.
4. a. >; explanations will vary.
b. >; explanations will vary.
c. >; explanations will vary.
5. a. $\frac{1}{2}$ gallon; expressions will vary.
b. $3\frac{3}{4}$ gallons; expressions will vary.
c. $1\frac{1}{2}$ gallons; expressions will vary.
d. Data accurately displayed on line plot
e. 17 gallons

Exit Ticket

1. a. Expressions will vary.
b. Expressions will vary.
2. 3; expressions will vary.

Homework

1. $5\frac{1}{4}$; expressions will vary.
 $6\frac{10}{21}$; expressions will vary.
2. $(6 \times 3) \div 8$ and $\frac{3}{8} \times 6$ circled;
explanations will vary.
3. a. 5; expressions will vary.
b. 3; expressions will vary.
c. $7\frac{14}{15}$; expressions will vary.
d. 4; expressions will vary.
e. $39\frac{1}{5}$; expressions will vary.
f. 36; expressions will vary.
4. a. $>$; explanations will vary.
b. $>$; explanations will vary.
c. $>$; explanations will vary.
5. a. $2\frac{1}{4}$; expressions will vary.
b. $1\frac{3}{4}$; expressions will vary.
c. $3\frac{1}{4}$; expressions will vary.
d. Line plot accurately drawn
e. $19\frac{3}{8}$; expressions will vary.

Lesson 11

Problem Set

1. $\frac{3}{8}$
2. 8 pt
3. 68 oz
4. $2\frac{1}{2}$
5. Answers will vary.

Exit Ticket

$3\frac{1}{3}$; tape diagram drawn accurately

Homework

1. 25 min
2. $4\frac{3}{4}$
3. $17\frac{3}{4}$
4. $3\frac{1}{2}$
5. Answers will vary.

Lesson 12

Problem Set

- $\frac{3}{4}$
 - 17
- 16
- Lillian; 26 min; bonus: $\frac{13}{30}$ hour
- 2; story problems will vary.
- 6; story problems will vary.
- 12 in Mr. Smith's class; 10 in Mrs. Jacob's class

Exit Ticket

6

Homework

- 16 minutes
- $\frac{21}{56}$ or $\frac{3}{8}$
- 12
- Jacob; bonus: $\frac{1}{6}$ minute
- 4; story problems will vary.
- 4; story problems will vary.

Lesson 13

Problem Set

- Accurate area model drawn
 - Answer provided
 - $\frac{1}{6}; \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$
 - $\frac{1}{12}; \frac{1}{4} \times \frac{1}{3} = \frac{1}{12}$
 - $\frac{1}{16}; \frac{1}{4} \times \frac{1}{4} = \frac{1}{16}$
 - $\frac{1}{12}; \frac{1}{2} \times \frac{1}{6} = \frac{1}{12}$
- $3 \times \frac{1}{4} = \frac{3}{4}; \frac{1}{3} \times \frac{1}{4} = \frac{1}{12}$; comparison statements will vary.
- $\frac{1}{6}$; accurate area model drawn
- $\frac{1}{10}$
- $\frac{1}{12}$

Exit Ticket

- $\frac{1}{3} \times \frac{1}{3} = \frac{1}{9}$; accurate area model drawn
- $\frac{1}{12}$

Homework

- Accurate area model drawn
 - $\frac{1}{4}$
 - $\frac{1}{6}$
 - $\frac{1}{8}$
 - $\frac{1}{10}$
 - $\frac{1}{9}$
 - $\frac{1}{12}$
- $\frac{1}{10}$; accurate area model drawn
- $\frac{1}{6}$; accurate area model drawn
- $\frac{1}{20}$; accurate model drawn

Lesson 14

Sprint

Side A¹

- | | | | |
|--------------|----------------|---------------|------------------|
| 1. 2 fifths | 12. 2 | 23. 60 sixths | 34. 90 sixths |
| 2. 3 fifths | 13. 4 halves | 24. 15 thirds | 35. 24 fourths |
| 3. 4 fifths | 14. 2 | 25. 30 thirds | 36. 72 fourths |
| 4. 4 fifths | 15. 6 thirds | 26. 30 thirds | 37. 32 eighths |
| 5. 3 eighths | 16. 2 | 27. 15 fifths | 38. 96 eighths |
| 6. 5 eighths | 17. 10 fifths | 28. 30 fifths | 39. 160 eighths |
| 7. 7 eighths | 18. 9 thirds | 29. 60 fifths | 40. 224 eighths |
| 8. 7 eighths | 19. 18 thirds | 30. 45 fifths | 41. 270 ninths |
| 9. 3 tenths | 20. 8 fourths | 31. 45 fifths | 42. 441 ninths |
| 10. 7 tenths | 21. 24 fourths | 32. 18 sixths | 43. 168 sevenths |
| 11. 7 tenths | 22. 12 sixths | 33. 90 sixths | 44. 294 sevenths |

Side B¹

- | | | | |
|---------------|---------------|----------------|------------------|
| 1. 2 sevenths | 12. 2 | 23. 24 fourths | 34. 120 sixths |
| 2. 3 sevenths | 13. 10 fifths | 24. 15 fifths | 35. 20 fourths |
| 3. 4 sevenths | 14. 3 | 25. 30 fifths | 36. 60 fourths |
| 4. 4 sevenths | 15. 9 thirds | 26. 60 fifths | 37. 24 eighths |
| 5. 3 tenths | 16. 5 | 27. 45 fifths | 38. 72 eighths |
| 6. 7 tenths | 17. 10 halves | 28. 45 fifths | 39. 120 eighths |
| 7. 9 tenths | 18. 6 thirds | 29. 15 thirds | 40. 168 eighths |
| 8. 9 tenths | 19. 12 thirds | 30. 30 thirds | 41. 315 ninths |
| 9. 3 eighths | 20. 12 sixths | 31. 30 thirds | 42. 378 ninths |
| 10. 5 eighths | 21. 60 sixths | 32. 24 sixths | 43. 147 sevenths |
| 11. 5 eighths | 22. 8 fourths | 33. 120 sixths | 44. 336 sevenths |

¹ Note: Answers are given here in unit form for ease of reading. Students may answer in standard form.

Problem Set

- Accurate model drawn
 - $3; 1; \frac{1}{3} \times \frac{3}{4} = \frac{3}{12} = \frac{1}{4}$
 - $4; 2; \frac{1}{2} \times \frac{4}{5} = \frac{4}{10} = \frac{2}{5}$
 - $\frac{1}{2}$
 - $\frac{1}{3}$
 - $\frac{3}{10}$
 - $\frac{1}{6}$
- $\frac{1}{8}$; accurate tape diagram drawn
- $\frac{1}{5}$
 - $\frac{1}{5}$
- Explanations may vary; accurate drawing shown to support explanation

Exit Ticket

- $\frac{1}{7} \cdot \frac{1}{3} \times \frac{3}{7} = \frac{3}{21} = \frac{1}{7}$; accurate model drawn
- $\frac{3}{8}$

Homework

- Accurate model drawn
 - $2; 1$
 - $4; 2$
 - $\frac{1}{5}$
 - $\frac{3}{8}$
 - $\frac{4}{15}$
 - $\frac{4}{15}$
- $\frac{1}{7}$; accurate model drawn
- $\frac{1}{5}$
 - $\frac{1}{15}$
- All grandchildren received the same amount; explanations may vary; accurate drawing shown to support response.
 - $\frac{1}{5}$

Lesson 15

Problem Set

1.
 - a. Answer provided
 - b. $\frac{3}{4} \times \frac{4}{5} = \frac{3}{5}$; accurate model drawn
 - c. $\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$; accurate model drawn
 - d. $\frac{4}{5} \times \frac{2}{3} = \frac{8}{15}$; accurate model drawn
 - e. $\frac{3}{4} \times \frac{2}{3} = \frac{1}{2}$; accurate model drawn
2.
 - a. $\frac{5}{8}$
 - b. $\frac{1}{2}$
 - c. $\frac{4}{7}$
 - d. $\frac{2}{15}$
3. $\frac{4}{10}$ or $\frac{2}{5}$
4. $\frac{1}{2}$
5.
 - a. $\frac{1}{3}$
 - b. 2

Exit Ticket

1.
 - a. $\frac{2}{5}$
 - b. $\frac{1}{6}$
2. $\frac{3}{20}$

Homework

1.
 - a. $\frac{2}{3} \times \frac{3}{4} = \frac{1}{2}$; accurate model drawn
 - b. $\frac{2}{5} \times \frac{3}{4} = \frac{3}{10}$; accurate model drawn
 - c. $\frac{2}{5} \times \frac{4}{5} = \frac{8}{25}$; accurate model drawn
 - d. $\frac{4}{5} \times \frac{3}{4} = \frac{3}{5}$; accurate model drawn
2.
 - a. $\frac{1}{4}$
 - b. $\frac{3}{5}$
 - c. $\frac{25}{48}$
 - d. $\frac{5}{16}$
 - e. $\frac{16}{27}$
 - f. $\frac{2}{21}$
3.
 - a. $\frac{1}{2}$
 - b. 250 mL
4. $\frac{1}{2}$
5.
 - a. $\frac{1}{10}$
 - b. $\frac{1}{2}$ pound

Lesson 16

Problem Set

- | | |
|-------|---------|
| 1. 5 | 5. \$40 |
| 2. 12 | 6. 12 |
| 3. 90 | 7. \$12 |
| 4. 36 | |

Exit Ticket

84 boats

Homework

1. 8; accurate tape diagram drawn
2. Accurate tape diagrams drawn for each
 - a. 180
 - b. 60
 - c. 313
 - d. Less than half
 - e. 126

Lesson 17

Problem Set

1.
 - a. Answer provided
 - b. $0.4 \times 0.3 = 0.12$; accurate area model
 - c. $0.1 \times 1.4 = 0.14$; accurate area model
 - d. $0.6 \times 1.7 = 1.02$; accurate area model
2.
 - a. 3.5
 - b. 0.35 ; $\frac{35}{100}$; 0.35
 - c. 0.035 ; 5, 7; $\frac{35}{1000}$; 0.035
 - d. 1.8
 - e. 0.18
 - f. 0.018
 - g. 4.8
 - h. 0.48
 - i. 0.048
3. 0.14 m
4.
 - a. 1.5 mi
 - b. 1.75 mi

Exit Ticket

1. $0.1 \times 1.2 = 0.12$; accurate area model
2.
 - a. 4.5
 - b. 0.45
 - c. 0.045

Homework

1.
 - a. Answer provided
 - b. $0.6 \times 0.2 = 0.12$; accurate area model
 - c. $0.1 \times 1.6 = 0.16$; accurate area model
 - d. $0.6 \times 1.9 = 1.14$; accurate area model
2.
 - a. 2.4
 - b. 0.24 ; $\frac{24}{100}$; 0.24
 - c. 0.024 ; 4, 6; $\frac{24}{1000}$; 0.024
 - d. 2.1
 - e. 0.21
 - f. 0.021
 - g. 6.5
 - h. 0.65
 - i. 0.065
3. 0.51 L
4.
 - a. 1.44 mi
 - b. 3.46 mi

Lesson 18

Sprint

Side A¹

- | | | | |
|------------------|---------------------|-------------------|------------------------|
| 1. 1 fourth | 12. 4 fifteenths | 23. 10 fifteenths | 34. 15 twentieths |
| 2. 1 sixth | 13. 1 twelfth | 24. 15 tenths | 35. 18 twentieths |
| 3. 1 eighth | 14. 2 twelfths | 25. 1 ninth | 36. 6 twentieths |
| 4. 1 fourteenth | 15. 6 twelfths | 26. 2 ninths | 37. 1 forty-ninth |
| 5. 1 fourteenth | 16. 1 eighteenth | 27. 4 ninths | 38. 3 fortieths |
| 6. 1 sixth | 17. 5 eighteenths | 28. 6 sixths | 39. 5 twenty-fourths |
| 7. 1 ninth | 18. 10 eighteenths | 29. 8 ninths | 40. 9 sixteenths |
| 8. 1 eighteenth | 19. 10 twelfths | 30. 10 ninths | 41. 12 eighteenths |
| 9. 1 fifteenth | 20. 1 twenty-fifth | 31. 9 tenths | 42. 18 eighths |
| 10. 1 fifteenth | 21. 4 twenty-fifths | 32. 3 twentieths | 43. 49 seventy-seconds |
| 11. 2 fifteenths | 22. 6 twenty-fifths | 33. 12 twentieths | 44. 63 ninety-sixths |

Side B¹

- | | | | |
|-------------------|----------------------|--------------------|-----------------------|
| 1. 1 sixth | 12. 4 fifteenths | 23. 15 twentieths | 34. 10 fifteenths |
| 2. 1 eighth | 13. 1 twelfth | 24. 20 fifteenths | 35. 12 fifteenths |
| 3. 1 tenth | 14. 3 twelfths | 25. 1 sixteenth | 36. 6 fifteenths |
| 4. 1 eighteenth | 15. 6 twelfths | 26. 3 sixteenths | 37. 1 eighty-first |
| 5. 1 eighteenth | 16. 1 eighteenth | 27. 9 sixteenths | 38. 3 fortieths |
| 6. 1 tenth | 17. 2 eighteenths | 28. 12 twelfths | 39. 3 twenty-fourths |
| 7. 1 fifteenth | 18. 10 eighteenths | 29. 15 sixteenths | 40. 4 ninths |
| 8. 1 thirty-fifth | 19. 9 eighths | 30. 18 sixteenths | 41. 24 thirty-seconds |
| 9. 1 fifteenth | 20. 1 twenty-fifths | 31. 16 eighteenths | 42. 12 ninths |
| 10. 1 fifteenth | 21. 9 twenty-fifths | 32. 2 fifteenths | 43. 48 sixty-thirds |
| 11. 2 fifteenths | 22. 12 twenty-fifths | 33. 8 fifteenths | 44. 56 eighty-fourths |

¹ Note: Answers are written in unit form for ease of reading, but students may express answers in standard form.

Problem Set

1.
 - a. Answer provided
 - b. 2.07; 207 hundredths
 - c. 18.48; 1,848 hundredths
 - d. 4.62; 462 hundredths
2.
 - a. Answer provided
 - b. 2.133; 2,133 thousandths
 - c. 16.968; 16,968 thousandths
 - d. 0.462; 462 thousandths
3.
 - a. 1.92
 - b. 3.84; 384 hundredths
 - c. 19.944; 19,944 thousandths
 - d. 26.25; 2,625 hundredths
4. \$4.44
5.
 - a. 15.75 sq. m
 - b. 39.375 sq. m

Exit Ticket

- a. 4.48
- b. 1.12
- c. 8.484
- d. 0.924

Homework

1.
 - a. Answer provided
 - b. 2.64
 - c. 14.08
 - d. 3.52
2.
 - a. Answer provided
 - b. 2.345; 2,345 thousandths
 - c. 12.928; 12,928 thousandths
 - d. 0.704; 704 thousandths
3.
 - a. 1.92
 - b. 4.83; 483 hundredths
 - c. 25.194; 25,194 thousandths
 - d. 29.25; 2,925 hundredths
4. \$19.25
5.
 - a. 70.2 sq. m
 - b. 175.5 sq. m

Lesson 19

Problem Set

1. a. Answer provided
b. $1\frac{1}{3}, \frac{1}{3}, \frac{4}{3}$
c. $\frac{7}{12}$
d. $1\frac{1}{12}$
e. $\frac{5}{16}$
f. $1\frac{2}{16}$
2. a. $\frac{24}{36}$ yd
b. \$4
3. $1\frac{3}{16}$ lb
4. $\frac{14}{16}$ gal

Exit Ticket

- a. $\frac{5}{12}$
- b. $1\frac{1}{12}$
- c. $\frac{9}{16}$
- d. $1\frac{2}{16}$

Homework

1. a. Answer provided
b. $2; \frac{1}{3}, \frac{6}{3}$
c. $\frac{5}{12}$
d. $1\frac{2}{12}$
e. $\frac{7}{16}$
f. $1\frac{4}{16}$
g. $\frac{1}{2}$
h. 2
2. a. $\frac{12}{16}$ lb
b. \$3
3. $1\frac{5}{16}$ lb
4. 3 gal

Lesson 20

Problem Set

1.
 - a. Answer provided
 - b. $\frac{3}{8}$
 - c. 56
 - d. $4\frac{3}{4}$
 - e. 216
 - f. $1\frac{2}{9}$
2. $4\frac{1}{2}t$
3. 37 qt
4. $15\frac{5}{12}yd$

Exit Ticket

- a. 26
- b. $1\frac{1}{4}$
- c. $1\frac{1}{4}$
- d. 44

Homework

1.
 - a. Answer provided
 - b. $\frac{5}{12}$
 - c. 46
 - d. $3\frac{3}{4}$
 - e. 258
 - f. $2\frac{3}{4}$
2. $2\frac{3}{4}min$
3. $\frac{1}{4}lb$
4. Yes, because the package weighs 15 lb

Lesson 21

Sprint

Side A

- | | | | |
|---------|-----------|-----------|-----------|
| 1. 6 | 12. 0.15 | 23. 1.2 | 34. 21 |
| 2. 0.6 | 13. 14 | 24. 0.12 | 35. 0.24 |
| 3. 0.06 | 14. 1.4 | 25. 0.012 | 36. 24 |
| 4. 9 | 15. 0.14 | 26. 0.012 | 37. 4.2 |
| 5. 0.9 | 16. 12 | 27. 35 | 38. 0.49 |
| 6. 0.09 | 17. 1.2 | 28. 3.5 | 39. 0.048 |
| 7. 8 | 18. 1.2 | 29. 0.35 | 40. 0.054 |
| 8. 0.8 | 19. 0.12 | 30. 0.035 | 41. 4.8 |
| 9. 0.08 | 20. 0.012 | 31. 0.035 | 42. 0.63 |
| 10. 15 | 21. 0.012 | 32. 16 | 43. 0.064 |
| 11. 1.5 | 22. 12 | 33. 1.8 | 44. 0.072 |

Side B

- | | | | |
|---------|-----------|-----------|-----------|
| 1. 8 | 12. 0.12 | 23. 1.6 | 34. 24 |
| 2. 0.8 | 13. 18 | 24. 0.16 | 35. 0.27 |
| 3. 0.08 | 14. 1.8 | 25. 0.016 | 36. 32 |
| 4. 6 | 15. 0.18 | 26. 0.016 | 37. 4.2 |
| 5. 0.6 | 16. 15 | 27. 45 | 38. 0.36 |
| 6. 0.06 | 17. 1.5 | 28. 4.5 | 39. 0.048 |
| 7. 9 | 18. 1.5 | 29. 0.45 | 40. 0.054 |
| 8. 0.9 | 19. 0.15 | 30. 0.045 | 41. 4.8 |
| 9. 0.09 | 20. 0.015 | 31. 0.045 | 42. 0.63 |
| 10. 12 | 21. 0.015 | 32. 12 | 43. 0.049 |
| 11. 1.2 | 22. 16 | 33. 1.4 | 44. 0.072 |

Problem Set

- Answer provided
 - $\frac{7}{7}$
 - $\frac{5}{5}$
 - Answers will vary.
- $\frac{25}{100} = 0.25$
 - $\frac{75}{100} = 0.75$
 - $\frac{1}{5} \times \frac{20}{20} = \frac{20}{100} = 0.20$
 - $\frac{4}{5} \times \frac{20}{20} = \frac{80}{100} = 0.80$
 - $\frac{1}{20} \times \frac{5}{5} = \frac{5}{100} = 0.05$
 - $\frac{27}{20} \times \frac{5}{5} = \frac{135}{100} = 1.35$
 - $\frac{7}{4} \times \frac{25}{25} = \frac{175}{100} = 1.75$
 - $\frac{8}{5} \times \frac{20}{20} = \frac{160}{100} = 1.60$
 - $\frac{24}{25} \times \frac{4}{4} = \frac{96}{100} = 0.96$
 - $\frac{93}{50} \times \frac{2}{2} = \frac{186}{100} = 1.86$
 - $2\frac{6}{25} \times \frac{4}{4} = 2\frac{24}{100} = 2.24$
 - $3\frac{31}{50} \times \frac{2}{2} = 3\frac{62}{100} = 3.62$
- No; answers will vary.
- Answers will vary.
- $$\frac{1}{8} = \frac{1}{2 \times 2 \times 2} \times \frac{5 \times 5 \times 5}{5 \times 5 \times 5} = \frac{5 \times 5 \times 5}{(2 \times 5) \times (2 \times 5) \times (2 \times 5)} =$$

$$\frac{25}{1000} = 0.125; \frac{1}{4} = 0.25 = 0.250 = 250$$

thousandths; $\frac{1}{8}$ is half of $\frac{1}{4}$, and half of 250 thousandths is 125 thousandths, so $\frac{1}{8} = 0.125$

Exit Ticket

- $\frac{5}{5}$
- $\frac{1}{4} \times \frac{25}{25} = \frac{25}{100} = 0.25$
 - $\frac{2}{5} \times \frac{2}{2} = \frac{4}{10} = 0.40$
 - $\frac{3}{25} \times \frac{4}{4} = \frac{12}{100} = 0.12$
 - $\frac{5}{20} \times \frac{5}{5} = \frac{25}{100} = 0.25$

Homework

1.
 - a. $\frac{3}{9}$
 - b. $\frac{7}{7}$
 - c. $\frac{5}{5}, \frac{25}{10}$
 - d. Answers will vary.
2.
 - a. $\frac{75}{100} = 0.75$
 - b. $\frac{25}{100} = 0.25$
 - c. $\frac{2}{5} \times \frac{2}{2} = \frac{4}{10} = 0.4$
 - d. $\frac{3}{5} \times \frac{2}{2} = \frac{6}{10} = 0.6$
 - e. $\frac{3}{20} \times \frac{5}{5} = \frac{15}{100} = 0.15$
 - f. $\frac{25}{20} \times \frac{5}{5} = \frac{125}{100} = 1.25$
 - g. $\frac{23}{25} \times \frac{4}{4} = \frac{92}{100} = 0.92$
 - h. $\frac{89}{50} \times \frac{2}{2} = \frac{178}{100} = 1.78$
 - i. $3\frac{11}{25} \times \frac{4}{4} = 3\frac{44}{100} = 3.44$
 - j. $5\frac{41}{50} \times \frac{2}{2} = 5\frac{82}{100} = 5.82$
3. $\frac{6}{8} = \frac{3}{4} \times \frac{25}{25} = \frac{75}{100} = 0.75$
4. Answers will vary.
5. $\frac{3}{4} \times \frac{25}{25} = \frac{75}{100} = 0.75$; $\$0.75 - \$0.44 = \$0.31$; 31 cents

Lesson 22

Problem Set

1. a. $\frac{1}{2} \times 8 = 4$; $\frac{1}{2}$ circled, 8 boxed; 4
b. $8 \times \frac{1}{2} = 4$; 8 circled, $\frac{1}{2}$ boxed; 4
2. a. Accurate tape diagram shown
b. Accurate tape diagram shown
3. a. Any number less than 4
b. Any number less than 7
c. 5
4. a. Any fraction greater than 1; answers will vary.
b. Any fraction less than 1; answers will vary
5. Answers will vary.
6. 25.5 in
6 in by 3 in; 14 in by 16 in

Exit Ticket

- a. Any number greater than 3; answers will vary.
- b. Any number less than 8; answers will vary.
- c. 2; answers will vary.

Homework

1. a. $\frac{1}{3} \times 6 = 2$; $\frac{1}{3}$ circled, 6 boxed; 2
b. $6 \times \frac{1}{3} = 2$; 6 circled, $\frac{1}{3}$ boxed; 2
2. a. Accurate tape diagram shown
b. Accurate tape diagram shown
3. a. Any number greater than 3; answers will vary.
b. Any number less than 6; answers will vary.
c. 5
4. a. Any fraction greater than 1; answers will vary.
b. Any fraction less than 1; answers will vary.
5. a. Any number less than $\frac{1}{3}$
b. Explanations will vary.
6. 17 yd
7. 2 in by 3 in; 6 in by 4 in

Lesson 23

Problem Set

1.
 - a. 1.00
 - b. 1.021
 - c. 0.989
2.
 - a. Less: 602×0.489 , 0.3×0.069 , 0.2×0.1
Greater: 13.89×1.004 , 102.03×4.015 ,
 0.72×1.24
 - b. Answers will vary.
3.
 - a. Is slightly less than; explanations will vary.
 - b. Is slightly more than; explanations will vary.
 - c. Is a lot less than; explanations will vary.
 - d. Is slightly more than; explanations will vary.
 - e. Is slightly less than; explanations will vary.
4. Dhakir's is longest; Carson's is shortest; explanations will vary.
5. Greater than 1; examples will vary.
Less than 1; examples will vary.

Exit Ticket

1.
 - a. 0.898
 - b. 1.00
 - c. 1.009
2. Slightly less; explanations will vary.

Homework

1.
 - a. Less: 828×0.921 , 0.05×0.1
Greater: 12.5×1.989 , 321.46×1.26 ,
 0.007×1.02 , 2.16×1.11
 - b. Explanations will vary.
2.
 - a. Is slightly less than; explanations will vary.
 - b. Is slightly more than; explanations will vary.
 - c. Is a lot less than; explanations will vary.
 - d. Is slightly more than; explanations will vary.
 - e. Is slightly less than; explanations will vary.
3. Kayla, Jonathan, Rachel; explanations will vary.
4.
 - a. Greater than 1; examples will vary.
 - b. Less than 1; examples will vary.

Lesson 24

Problem Set

1. 2.5 mL
2. $\frac{21}{40}$ or 0.525 L
3. 20.25 min
4. 4,590.72 m
5. 20
6. \$266

Exit Ticket

1. 3.725 kg
2. 10

Homework

1. 14.375 lb
2. 0.225 cm
3. 38
4. \$215,942.65
5. 108
6. \$142.60

Lesson 25

Problem Set

1.
 - a. 8; 2; 8; 8
 - b. 8; 4; 8; 8
 - c. 15; 3; 15; 15
 - d. 15; 5; 15; 15
2. Accurate check shown for each
 - a. 10
 - b. 6
 - c. 20
 - d. 6
 - e. 16
 - f. 42
 - g. 24
 - h. 36
3. 20
4.
 - a. 18
 - b. 60
 - c. 32
5. 12 gal

Exit Ticket

1.
 - a. 10; 2; 10; 10
 - b. 16; 4; 16, 4; 16
2. Yes

Homework

1.
 - a. 9; 3; 9, 3; 9
 - b. 12; 4; 12, 3; 12
 - c. 12; 3; 12, 4; 12
 - d. 20; 4; 20, 5; 20
2. Accurate check shown for each
 - a. 8
 - b. 12
 - c. 20
 - d. 40
 - e. 18
 - f. 18
 - g. 30
 - h. 60
3. 24
4. 24 bags of nuts, 20 bags of cherries, and 24 bags of dried fruit

Lesson 26

Problem Set

1. Model or tape diagram drawn for each
 - a. $\frac{1}{6}$
 - b. $\frac{1}{12}$
 - c. $\frac{1}{8}$
 - d. $\frac{1}{12}$
2. Accurate check shown for each
 - a. $\frac{1}{14}$
 - b. $\frac{1}{18}$
 - c. $\frac{1}{20}$
 - d. $\frac{1}{20}$
 - e. $\frac{1}{10}$
 - f. $\frac{1}{18}$
 - g. $\frac{1}{16}$
 - h. $\frac{1}{100}$
3. $\frac{1}{4}$; picture drawn
4.
 - a. $\frac{1}{16}$ gal
 - b. 1 c
5.
 - a. $\frac{1}{12}$
 - b. \$28.80

Exit Ticket

1. Model or tape diagram drawn for each
 - a. $\frac{1}{8}$
 - b. $\frac{1}{40}$
2. $\frac{1}{12}$

Homework

1. Model or tape diagram drawn for each

a. $\frac{1}{8}$

b. $\frac{1}{18}$

c. $\frac{1}{12}$

d. $\frac{1}{10}$

2. Accurate check shown for each

a. $\frac{1}{20}$

b. $\frac{1}{40}$

c. $\frac{1}{15}$

d. $\frac{1}{15}$

e. $\frac{1}{32}$

f. $\frac{1}{21}$

g. $\frac{1}{50}$

h. $\frac{1}{100}$

3. $\frac{1}{16}$ mile

4. a. $\frac{2}{15}$

b. 105 pages

Lesson 27

Problem Set

1. 12; accurate model shown
2. $\frac{1}{12}$; accurate model shown
3. a. $\frac{1}{20}$ m; accurate model shown
b. 5 cm
4. a. $\frac{1}{20}$ t; accurate model shown
b. 100 lb
5. a. 30 sixths
b. 6 in
6. a. $\frac{1}{16}$
b. 48 oz
c. $3\frac{15}{16}$ c

Exit Ticket

1. 12 fourths; accurate model shown
2. $\frac{1}{8}$; accurate model shown

Homework

1. 32; accurate model shown
2. $\frac{1}{24}$; accurate model shown
3. a. $\frac{1}{20}$ L; accurate model shown
b. 50 mL
4. a. 20 fifths
b. 20 cm
5. a. $\frac{1}{12}$
b. 72 oz
c. 3 lb

Lesson 28

Problem Set

1. Answers will vary; 20
2. Answers will vary; $\frac{1}{20}$
3.
 - a. Answers will vary; 6
 - b. Answers will vary; $\frac{1}{12}$
 - c. Answers will vary; $\frac{1}{12}$
 - d. Answers will vary; 15

Exit Ticket

- a. Answers will vary; 8
- b. Answers will vary; $\frac{1}{8}$

Homework

1. Answers will vary; 14
2. Answers will vary; $\frac{1}{9}$ lb
3.
 - a. Answers will vary; 8
 - b. Answers will vary; $\frac{1}{8}$
 - c. Answers will vary; $\frac{1}{15}$
 - d. Answers will vary; 30

Lesson 29

Problem Set

1.
 - a. $5 \div \frac{1}{10} = 50$; 10; 50
 - b. $8 \div \frac{1}{10} = 80$; 10; 80
 - c. $5.2 \div \frac{1}{10} = 52$; 50; 2; 52
 - d. $8.7 \div \frac{1}{10} = 87$; 80; 7; 87
 - e. $5 \div \frac{1}{100} = 500$; 100; 500
 - f. $8 \div \frac{1}{100} = 800$; 100; 800
 - g. $5.2 \div \frac{1}{100} = 520$; 500; 20; 520
 - h. $8.7 \div \frac{1}{100} = 870$; 800; 70; 870
2.
 - a. 60
 - b. 180
 - c. 600
 - d. 17
 - e. 3,100
 - f. 1,100
 - g. 1,250
 - h. 374
 - i. 1,250
3. 46
4. Cheryl; answers will vary.
5. 20

Exit Ticket

1. 83; 830
2. 2,800; 280
3. 1,509
4. 2,674
5. 63,298

Homework

1.
 - a. $9 \div \frac{1}{10} = 90$; 10; 90
 - b. $6 \div \frac{1}{10} = 60$; 10; 60
 - c. $3.6 \div \frac{1}{10} = 36$; 30; 6; 36
 - d. $12.8 \div \frac{1}{10} = 128$; 120; 8; 128
 - e. $3 \div \frac{1}{100} = 300$; 100; 300
 - f. $7 \div \frac{1}{100} = 700$; 100; 700
 - g. $4.7 \div \frac{1}{100} = 470$; 400; 70; 470
 - h. $11.3 \div \frac{1}{100} = 1,130$; 1,100; 30; 1,130
2.
 - a. 20
 - b. 230
 - c. 500
 - d. 72
 - e. 5,100
 - f. 310
 - g. 2,310
 - h. 437
 - i. 2,450
3. 1,260
4. Geraldine; answers will vary.
5. \$132.64

Lesson 30

Sprint

Side A

- | | | | |
|-------------------|--------------------|--------------------|--------------------|
| 1. $\frac{1}{4}$ | 12. 35 | 23. 16 | 34. 18 |
| 2. $\frac{1}{6}$ | 13. $\frac{1}{35}$ | 24. $\frac{1}{9}$ | 35. 36 |
| 3. $\frac{1}{8}$ | 14. $\frac{1}{6}$ | 25. $\frac{2}{9}$ | 36. 49 |
| 4. $\frac{1}{14}$ | 15. 6 | 26. $\frac{1}{8}$ | 37. 64 |
| 5. 14 | 16. $\frac{1}{8}$ | 27. $\frac{3}{8}$ | 38. 81 |
| 6. 12 | 17. 8 | 28. $\frac{1}{10}$ | 39. $\frac{1}{56}$ |
| 7. 10 | 18. $\frac{1}{10}$ | 29. $\frac{3}{10}$ | 40. 72 |
| 8. 6 | 19. 10 | 30. $\frac{1}{12}$ | 41. $\frac{1}{56}$ |
| 9. 10 | 20. 12 | 31. $\frac{5}{12}$ | 42. 42 |
| 10. 15 | 21. $\frac{1}{12}$ | 32. $\frac{5}{18}$ | 43. 63 |
| 11. 20 | 22. $\frac{1}{16}$ | 33. $\frac{1}{18}$ | 44. $\frac{1}{72}$ |

Side B

- | | | | |
|-------------------|--------------------|--------------------|--------------------|
| 1. $\frac{1}{4}$ | 12. 14 | 23. 9 | 34. 30 |
| 2. $\frac{1}{15}$ | 13. $\frac{1}{14}$ | 24. $\frac{1}{16}$ | 35. 24 |
| 3. $\frac{1}{20}$ | 14. $\frac{1}{8}$ | 25. $\frac{3}{16}$ | 36. 42 |
| 4. $\frac{1}{35}$ | 15. 8 | 26. $\frac{1}{9}$ | 37. 56 |
| 5. 35 | 16. $\frac{1}{6}$ | 27. $\frac{2}{9}$ | 38. 72 |
| 6. 30 | 17. 6 | 28. $\frac{1}{12}$ | 39. $\frac{1}{64}$ |
| 7. 25 | 18. $\frac{1}{4}$ | 29. $\frac{5}{12}$ | 40. 81 |
| 8. 15 | 19. 4 | 30. $\frac{1}{25}$ | 41. $\frac{1}{72}$ |
| 9. 4 | 20. 12 | 31. $\frac{3}{25}$ | 42. 49 |
| 10. 6 | 21. $\frac{1}{12}$ | 32. $\frac{3}{20}$ | 43. 54 |
| 11. 8 | 22. $\frac{1}{9}$ | 33. $\frac{1}{30}$ | 44. $\frac{1}{48}$ |

Problem Set

1.
 - a. Answer provided.
 - b. 90
 - c. $\frac{3.5}{0.5}$; 7
 - d. $\frac{3.5}{0.05}$; 70
 - e. $\frac{4.2}{0.7}$; 6
 - f. $\frac{0.42}{0.07}$; 6
 - g. $\frac{10.8}{0.9}$; 12
 - h. $\frac{1.08}{0.09}$; 12
 - i. $\frac{3.6}{1.2}$; 3
 - j. $\frac{0.36}{0.12}$; 3
 - k. $\frac{17.5}{2.5}$; 7
 - l. $\frac{1.75}{0.25}$; 7
2. Answers will vary.
3.
 - a. 12
 - b. 6
4. 83
5. 3

Exit Ticket

- a. $\frac{3.2}{0.8}$; 4
- b. $\frac{3.2}{0.08}$; 40
- c. $\frac{7.2}{0.9}$; 8
- d. $\frac{0.72}{0.09}$; 8

Homework

1.
 - a. 3
 - b. 30
 - c. $\frac{4.8}{0.6}$; 8
 - d. $\frac{0.48}{0.06}$; 8
 - e. $\frac{8.4}{0.7}$; 12
 - f. $\frac{0.84}{0.07}$; 12
 - g. $\frac{4.5}{0.15}$; 3
 - h. $\frac{0.45}{0.15}$; 3
 - i. $\frac{14.4}{1.2}$; 12
 - j. $\frac{1.44}{0.12}$; 12
2. Leann is incorrect; answers will vary
3.
 - a. 8
 - b. 16
4. 15

Lesson 31

Problem Set

1. a. $53.2 \div 0.4 \approx \frac{520}{4} = 130$; 133
b. $1.52 \div 0.8 \approx \frac{16}{8} = 2$; 1.9
2. a. $9.42 \div 0.03 \approx \frac{900}{3} = 300$; 314
b. $39.36 \div 0.96 \approx \frac{40}{1} = 40$; 41
3. a. 154
b. $\frac{316}{4}$; 79
c. $\frac{23.1}{3}$; 7.7
d. $\frac{1560}{24}$; 65
4. a. 27
b. 21
5. 6

Exit Ticket

1. $6.39 \div 0.09 \approx \frac{630}{9} = 70$; $639 \div 9 = 71$
2. $82.14 \div 0.6 \approx \frac{8400}{60} = 140$; $8214 \div 60 = 136.9$

Homework

1. a. $61.6 \div 0.8 \approx \frac{640}{8} = 80$; 77
b. $5.74 \div 0.7 \approx \frac{56}{7} = 8$; 8.2
2. a. $4.74 \div 0.06 \approx \frac{480}{6} = 80$; 79
b. $19.44 \div 0.54 \approx \frac{2000}{50} = 40$; 36
3. a. 64
b. $\frac{752}{8}$; 94
c. $\frac{124.5}{5}$; 24.9
d. $\frac{560}{16}$; 35
4. 54 green; 36 purple
5. 14

Lesson 32

Problem Set

- $(3 + 2) \div \frac{1}{3}$ circled
- $\frac{28}{\frac{4}{5} - \frac{7}{10}}$ and $28 \div (\frac{4}{5} - \frac{7}{10})$ circled
- Answers will vary.
- 3(a); explanations will vary.
- Answers will vary.
- 5(a); explanations will vary.
- 12
 - $\frac{5}{6}$
 - $\frac{1}{12}$
 - $\frac{1}{2}$
 - $\frac{3}{40}$
 - 12
- $\frac{2}{3} \times 20 - 5$
 - $\frac{1}{3} \times (20 - 5)$

Exit Ticket

- Answers will vary.
- Answers will vary.
 - Answers will vary.
- 2(b); explanations will vary.

Homework

- $(7 - 4) \div \frac{1}{5}$ circled.
- $42 \div (\frac{2}{3} + \frac{3}{4})$ and $\frac{42}{\frac{2}{3} + \frac{3}{4}}$ circled.
- Answers will vary.
- 3(a); explanations will vary.
- 30
 - $1\frac{1}{5}$
 - $\frac{1}{100}$
 - $\frac{2}{5}$
 - 400
- Answers will vary.
 - $32 - 5 - \frac{1}{3}(32 - 5)$ circled.

Lesson 33

Sprint

Side A

- | | | | |
|---------|-----------|-----------|----------|
| 1. 1 | 12. 1,000 | 23. 50 | 34. 325 |
| 2. 10 | 13. 2,000 | 24. 5 | 35. 5 |
| 3. 20 | 14. 8,000 | 25. 0.5 | 36. 5 |
| 4. 70 | 15. 10 | 26. 0.8 | 37. 50 |
| 5. 10 | 16. 100 | 27. 400 | 38. 90 |
| 6. 100 | 17. 200 | 28. 4,000 | 39. 400 |
| 7. 200 | 18. 900 | 29. 4,700 | 40. 80 |
| 8. 600 | 19. 500 | 30. 5,900 | 41. 70 |
| 9. 1 | 20. 5,000 | 31. 30 | 42. 40 |
| 10. 10 | 21. 6,000 | 32. 300 | 43. 12.1 |
| 11. 100 | 22. 2,000 | 33. 320 | 44. 321 |

Side B

- | | | | |
|---------|-----------|-----------|----------|
| 1. 10 | 12. 1,000 | 23. 40 | 34. 236 |
| 2. 10 | 13. 2,000 | 24. 4 | 35. 3 |
| 3. 20 | 14. 9,000 | 25. 0.4 | 36. 3 |
| 4. 80 | 15. 10 | 26. 0.7 | 37. 30 |
| 5. 10 | 16. 100 | 27. 500 | 38. 80 |
| 6. 100 | 17. 200 | 28. 5,000 | 39. 400 |
| 7. 200 | 18. 700 | 29. 5,300 | 40. 70 |
| 8. 700 | 19. 400 | 30. 6,800 | 41. 80 |
| 9. 1 | 20. 4,000 | 31. 20 | 42. 30 |
| 10. 10 | 21. 5,000 | 32. 200 | 43. 12.1 |
| 11. 100 | 22. 8,000 | 33. 230 | 44. 211 |

Problem Set

1. a. $\frac{1}{12}$ L
b. $1\frac{1}{2}$ L
2. a. 7
b. $\frac{1}{4}$ hr or 15 min
c. 14
3. a. 18
b. 6
4. a. 90
b. 360
5. Answers will vary.
6. Answers will vary.

Exit Ticket

- a. 6
- b. 12

Homework

1. a. $\frac{1}{15}$ kg
b. $1\frac{1}{3}$ kg
2. a. 19
b. 38
3. a. 13
b. 6
4. a. Answers will vary.
b. Answers will vary.
5. Answers will vary.