



Answer Key

GRADE 4 • MODULE 7

Exploring Measurement with Multiplication

Lesson 1

Sprint

Side A

- | | | | |
|------------|------------|------------|------------|
| 1. \$0.01 | 12. \$0.20 | 23. \$0.06 | 34. \$0.50 |
| 2. \$0.02 | 13. \$0.03 | 24. \$0.50 | 35. \$0.75 |
| 3. \$0.03 | 14. \$0.30 | 25. \$0.05 | 36. \$0.53 |
| 4. \$0.08 | 15. \$0.90 | 26. \$0.11 | 37. \$0.28 |
| 5. \$0.80 | 16. \$0.07 | 27. \$0.12 | 38. \$0.78 |
| 6. \$0.70 | 17. \$0.80 | 28. \$0.17 | 39. \$0.70 |
| 7. \$0.60 | 18. \$0.04 | 29. \$0.45 | 40. \$0.35 |
| 8. \$0.20 | 19. \$0.60 | 30. \$0.63 | 41. \$0.85 |
| 9. \$0.01 | 20. \$0.08 | 31. \$0.63 | 42. \$0.65 |
| 10. \$0.10 | 21. \$0.70 | 32. \$0.97 | 43. \$0.95 |
| 11. \$0.02 | 22. \$0.09 | 33. \$0.25 | 44. \$0.93 |

Side B

- | | | | |
|------------|------------|------------|------------|
| 1. \$0.02 | 12. \$0.20 | 23. \$0.05 | 34. \$0.50 |
| 2. \$0.03 | 13. \$0.03 | 24. \$0.60 | 35. \$0.75 |
| 3. \$0.04 | 14. \$0.30 | 25. \$0.04 | 36. \$0.54 |
| 4. \$0.09 | 15. \$0.80 | 26. \$0.11 | 37. \$0.29 |
| 5. \$0.90 | 16. \$0.06 | 27. \$0.12 | 38. \$0.79 |
| 6. \$0.80 | 17. \$0.70 | 28. \$0.18 | 39. \$0.80 |
| 7. \$0.70 | 18. \$0.09 | 29. \$0.54 | 40. \$0.45 |
| 8. \$0.30 | 19. \$0.50 | 30. \$0.74 | 41. \$0.95 |
| 9. \$0.01 | 20. \$0.07 | 31. \$0.74 | 42. \$0.75 |
| 10. \$0.10 | 21. \$0.90 | 32. \$0.86 | 43. \$0.85 |
| 11. \$0.02 | 22. \$0.08 | 33. \$0.25 | 44. \$0.94 |

Practice Sheet

- a. 16, 32, 48, 64, 80, 96, 112, 128, 144, 160; multiply the number of pounds times 16
- b. 3, 6, 9, 12, 15, 18, 21, 24, 27, 30; multiply the number of yards times 3
- c. 12, 24, 36, 48, 60, 72, 84, 96, 108, 120; multiply the number of feet times 12

Problem Set

- 1. 32 1-ounce weights
- 2. 13 1-ounce weights
- 3. 84 ounces
- 4.
 - a. 16, 48, 112, 160, 272; multiply pounds times 16
 - b. 12, 24, 60, 120, 180; multiply feet times 12
 - c. 3, 6, 12, 30, 42; multiply yards times 3
- 5.
 - a. 37
 - b. 142
 - c. 16
 - d. 38
 - e. 442
 - f. 63
 - g. 229
 - h. 204
- 6.
 - a. False; $2 \text{ kg} > 1,600 \text{ g}$
 - b. False; $12 \text{ ft} < 150 \text{ in}$
 - c. True

Exit Ticket

- 1.
 - a. 96
 - b. 14
 - c. 231
- 2.
 - a. False; $3 \text{ lb} > 47 \text{ ounces}$
 - b. True

Homework

1.
 - a. 3, 6, 9, 15, 30
 - b. 12, 24, 60, 120, 180
 - c. 36, 108, 216, 360, 432
2.
 - a. 74
 - b. 334
 - c. 14
 - d. 40
 - e. 206
 - f. 34
 - g. 47
 - h. 204
3. 240 inches
4. 16, 32, 64, 160, 192
5. 114 ounces
6.
 - a. True
 - b. False; $10 \text{ yd} < 361 \text{ in}$
 - c. False; $10 \text{ liters} = 10,000 \text{ mL}$

Lesson 2

Core Fluency Practice Set A

Part 1

1. 15,413
2. 51,294
3. 88,001
4. 683,874
5. 483,391
6. 932,476

Part 2

1. 15,413
2. 51,294
3. 88,001
4. 683,874
5. 483,391
6. 932,476

Core Fluency Practice Set B

Part 1

1. 2,193
2. 18,016
3. 9,502
4. 400,685

Part 2

1. 2,193
2. 18,016
3. 9,502
4. 400,685

Core Fluency Practice Set C

Part 1

1. 2,418
2. 22,148
3. 25,063
4. 375,707

Part 2

1. 2,418
2. 22,148
3. 25,063
4. 375,707

Core Fluency Practice Set D**Part 1**

1. 18,991
2. 525
3. 793,672
4. 811,939
5. 632,594
6. 591,071

Part 2

1. 18,991
2. 525
3. 793,672
4. 811,939
5. 632,594
6. 591,071

Practice Sheet

- a. 4, 8, 12, 16, 20, 24, 28, 32, 36, 40; multiply number of gallons times 4
- b. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20; multiply number of quarts times 2
- c. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20; multiply number of pints times 2
- d. 8; 4; 16

Problem Set

1. 6 pints
2. 6 quarts
3. 4,000 mL
4. a. 4, 12, 20, 40, 52; multiply the number of gallons times 4
b. 2, 4, 12, 20, 32; multiply the number of quarts times 2
5. a. 34
b. 62
c. 18
d. 54
e. 214
f. 520
6. a. False; 1 gallon > 3 quarts
b. True
c. False; 15 pints < 2 gallons
7. 2,500 doses
8. Moore family
9. 144 cups

Exit Ticket

1. 4, 8, 16
2. No; answers will vary.

Homework

1. 48 cups
2. 6 quarts (or equivalent)
3. 1,720 mL (or equivalent)
4.
 - a. 4, 8, 16, 48, 60
 - b. 2, 4, 12, 20, 32
5.
 - a. 27
 - b. 50
 - c. 11
 - d. 58
 - e. 140
 - f. 444
6. Answers will vary.
7.
 - a. False; 2 quarts > 3 pints
 - b. True
 - c. True
8. 6 pints; answers will vary.
9. 12 cups

Lesson 3

Practice Sheet

- 60, 120, 180, 240, 300, 360, 420, 480, 540, 600; multiply the number of minutes times 60
- 60, 120, 180, 240, 300, 360, 420, 480, 540, 600; multiply the number of hours times 60
- 24, 48, 72, 96, 120, 144, 168, 192, 216, 240; multiply the number of days times 24

Problem Set

- 120 minutes
- Under 360 minutes
- 60, 180, 360, 600, 900; multiply by 60
 - 24, 48, 120, 168, 240; multiply the number of days times 24
- 570
 - 465
 - 236
 - 1,347
 - 331
 - 1,385
- Explanations will vary.
- 883 seconds
- 744 hours

Exit Ticket

1,324 minutes

Homework

- 180 minutes
- 300 minutes
- 60, 120, 300, 540, 720; multiply the number of hours times 60
 - 24, 72, 144, 192, 480; multiply the number of days times 24
- 630
 - 375
 - 116
 - 225
 - 573
 - 1,025
- Explanations will vary.
- 516 seconds
- 264 hours

Lesson 4

Problem Set

1. 240 minutes
2. 112 ounces
3. 36 feet
4. 66,000 mL
5. 86 ounces

Exit Ticket

8 ounces

Homework

1. 360 minutes
2. 56 ounces
3. 1,350 mL
4. 12 feet
5. 14
6. a. 45 quarts (or equivalent)
b. No; answers will vary

Lesson 5

Sprint

Side A

- | | | | |
|----------|-----------|-----------|---------|
| 1. 1,000 | 12. 6 | 23. 6,000 | 34. 1 |
| 2. 2,000 | 13. 9 | 24. 500 | 35. 8 |
| 3. 3,000 | 14. 30 | 25. 700 | 36. 1 |
| 4. 7,000 | 15. 15 | 26. 400 | 37. 6 |
| 5. 5,000 | 16. 12 | 27. 800 | 38. 1 |
| 6. 100 | 17. 24 | 28. 12 | 39. 8 |
| 7. 200 | 18. 36 | 29. 24 | 40. 1 |
| 8. 300 | 19. 120 | 30. 18 | 41. 6 |
| 9. 900 | 20. 48 | 31. 27 | 42. 96 |
| 10. 600 | 21. 9,000 | 32. 60 | 43. 7 |
| 11. 3 | 22. 4,000 | 33. 72 | 44. 108 |

Side B

- | | | | |
|-----------|---------|-----------|---------|
| 1. 100 | 12. 6 | 23. 600 | 34. 1 |
| 2. 200 | 13. 9 | 24. 5,000 | 35. 8 |
| 3. 300 | 14. 15 | 25. 7,000 | 36. 1 |
| 4. 700 | 15. 30 | 26. 4,000 | 37. 6 |
| 5. 500 | 16. 12 | 27. 8,000 | 38. 1 |
| 6. 1,000 | 17. 24 | 28. 18 | 39. 9 |
| 7. 2,000 | 18. 36 | 29. 27 | 40. 1 |
| 8. 3,000 | 19. 120 | 30. 12 | 41. 7 |
| 9. 9,000 | 20. 48 | 31. 24 | 42. 108 |
| 10. 6,000 | 21. 900 | 32. 60 | 43. 6 |
| 11. 3 | 22. 400 | 33. 72 | 44. 96 |

Problem Set

1. a. Tape diagram labeled; 11 feet 7 inches
b. Answers will vary.
2. Answers will vary; 29 pounds 14 ounces

Exit Ticket

1,340 yards

Homework

1. 24 cups
2. 36 minutes
3. 12 ounces
4. a. Tape diagram labeled; 19 feet 2 inches
b. Answers will vary.
5. Answers will vary; 21 pounds 8 ounces

Lesson 6

Problem Set

1.
 - a. 1
 - b. 3
 - c. 3
 - d. 4, 3
 - e. 1
 - f. 3
 - g. 1
 - h. 4, 1
2.
 - a. 7, 2
 - b. 14, 2
 - c. 8, 7
 - d. 4, 2
 - e. 17, 2
 - f. 10, 0
3. 1 quart 1 cup, or 5 cups
4.
 - a. 44 cups (or equivalent)
 - b. 4 cups

Exit Ticket

1.
 - a. 11, 1
 - b. 3, 2
2. 3 quarts

Homework

1.
 - a. 2
 - b. 2
 - c. 1
 - d. 2, 2
 - e. 1
 - f. 4
 - g. 1
 - h. 3, 1
2.
 - a. 5, 1
 - b. 18, 1
 - c. 6, 7
 - d. 6, 5
 - e. 14, 3
 - f. 14, 2
3. 1 gallon 2 quarts, or 6 quarts
4.
 - a. 49 cups (or equivalent)
 - b. 15 cups

Lesson 7

Problem Set

1.
 - a. 1
 - b. 4
 - c. 2
 - d. 7, 2
 - e. 1
 - f. 1, 3
 - g. 4
 - h. 4, 4
2.
 - a. 6, 1
 - b. 10, 1
 - c. 3, 2
 - d. 3, 2
 - e. 7, 1
 - f. 8, 3
 - g. 33, 8
 - h. 1, 3
3. 2 ft 8 in, or 32 in
4. 14 ft 1 in, or 169 in
5.
 - a. 5 ft 10 in, or 70 in
 - b. 17 ft 6 in, or 210 in

Exit Ticket

1. 5
2. 5, 2
3. 8
4. 4, 2

Homework

1.
 - a. 3
 - b. 1, 2
 - c. 1, 1
 - d. 4, 2
 - e. 1
 - f. 1, 2
 - g. 10
 - h. 1, 6
2.
 - a. 5, 1
 - b. 8, 0
 - c. 4, 2
 - d. 1, 2
 - e. 8, 1
 - f. 12, 2
 - g. 31, 8
 - h. 4, 3
3. 15 ft 9 in, or 189 in
4. 8 ft 9 in, or 105 in
5.
 - a. 12 ft 6 in, 150 in
 - b. Length is equal to width

Lesson 8

Problem Set

1.
 - a. 1
 - b. 2
 - c. 3
 - d. 11, 12
 - e. 4, 2
 - f. 40, 2
 - g. 24, 4
 - h. 112, 15
2. 11 pounds 7 ounces, or 183 ounces
3. 1 pound 2 ounces
4.
 - a. 9 pounds 10 ounces, or 154 ounces
 - b. 11 pounds 13 ounces, or 189 ounces

Exit Ticket

1. 5, 0
2. 16, 2
3. 4, 8
4. 6, 14

Homework

1.
 - a. 1
 - b. 2
 - c. 5
 - d. 11, 8
 - e. 6, 1
 - f. 28, 1
 - g. 22, 2
 - h. 72, 14
2. 4 pounds 11 ounces, or 75 ounces
3. 3 ounces
4.
 - a. 6 pounds 9 ounces, or 105 ounces
 - b. 17 pounds 5 ounces, or 277 ounces
 - c. 6 pounds 11 ounces, or 107 ounces

Lesson 9

Problem Set

1.
 - a. 1
 - b. 2
 - c. 48
 - d. 3, 48
 - e. 1
 - f. 2, 15
2.
 - a. 4, 10
 - b. 9, 10
 - c. 2, 25
 - d. 2, 54
 - e. 6, 7
 - f. 16, 50
3. 2 minutes 23 seconds, or 143 seconds
4.
 - a. No; explanations will vary.
 - b. 21 minutes

Exit Ticket

1. 2, 50
2. 7, 20
3. 10, 34
4. 1, 27

Homework

1.
 - a. 1
 - b. 3
 - c. 27
 - d. 2, 27
 - e. 1
 - f. 4, 45
2.
 - a. 6, 5
 - b. 9, 10
 - c. 3, 26
 - d. 2, 38
 - e. 4, 9
 - f. 16, 39
3. 5 minutes 7 seconds, or 307 seconds
4.
 - a. No; explanations will vary.
 - b. 4 hours 28 minutes, or 268 minutes;
2 hours 32 minutes, or 152 minutes

Lesson 10

Problem Set

1. 12 hours 40 minutes, or 760 minutes
2. 23 gallons 1 quart, or 93 quarts
3. 30 pounds 13 ounces, or 493 ounces
4. 2 feet 11 inches, or 35 inches

Exit Ticket

2 hours 35 minutes, 155 minutes

Homework

1. 1 cup
2. 5 quarts 1 cup, or 21 cups
3. 5 hours 25 minutes, or 325 minutes
4. 2 feet 6 inches
5. 155 pounds 12 ounces

Lesson 11

Problem Set

1. 4 hours 10 minutes, or 250 minutes
2. 99
3. 154
4. Yes

Exit Ticket

55 minutes

Homework

1. 3 hours 43 minutes, or 223 minutes
2. 25 feet 3 inches, or 303 inches
3. 80
4. 1 hour 31 minutes, or 91 minutes
5. Yes

Lesson 12

Problem Set

- | | |
|---|---------|
| 1. Tape diagram drawn | 6. a. 4 |
| a. 1 | b. 14 |
| b. 2 | c. 10 |
| c. 3 | d. 31 |
| 2. Tape diagram drawn to show equivalence | e. 18 |
| 3. Tape diagram drawn to show equivalence | f. 78 |
| 4. Tape diagram drawn to show equivalence | g. 15 |
| 5. a. 1 | h. 75 |
| b. 6, 6 | |
| c. 3, 3 | |
| d. 9, 9 | |
| e. 4, 4 | |
| f. 8, 8 | |

Exit Ticket

- | |
|------------|
| 1. a. 6, 6 |
| b. 9, 9 |
| 2. a. 4 |
| b. 23 |

Homework

1. Tape diagram drawn to show equivalence
2. Tape diagram drawn to show equivalence
3. Tape diagram drawn to show equivalence
4.
 - a. 6
 - b. 3, 3
 - c. 2, 2
 - d. 4, 4
 - e. 8, 8
 - f. 10, 10
5.
 - a. 8
 - b. 10
 - c. 14
 - d. 21
 - e. 75
 - f. 88
 - g. 30
 - h. 69
 - i. 116
 - j. 94

Lesson 13

Problem Set

- | | | | |
|----|--|----|--------|
| 1. | a. 1 | 5. | a. 18 |
| | b. 8, 8 | | b. 54 |
| | c. 4, 4 | | c. 92 |
| | d. 12, 12 | | d. 88 |
| | e. 2, 2 | | e. 75 |
| | f. 6, 6 | | f. 210 |
| 2. | Tape diagram drawn to show equivalence | | g. 135 |
| 3. | a. 1 | | h. 330 |
| | b. 30, 30 | | i. 10 |
| | c. 15, 15 | | j. 23 |
| 4. | Tape diagram drawn to show equivalence | | k. 18 |
| | | | l. 27 |
| | | | m. 69 |
| | | | n. 100 |

Exit Ticket

1. Tape diagram drawn to show equivalence
2.
 - a. 20
 - b. 165
 - c. 66
 - d. 46

Homework

- | | | | |
|----|--|----|--------|
| 1. | a. 1 | 5. | a. 36 |
| | b. 8, 8 | | b. 78 |
| | c. 4, 4 | | c. 108 |
| | d. 12, 12 | | d. 66 |
| | e. 2, 2 | | e. 105 |
| | f. 10, 10 | | f. 270 |
| 2. | Tape diagram drawn to show equivalence | | |
| 3. | a. 1 | | g. 225 |
| | b. 30, 30 | | h. 320 |
| | c. 15, 15 | | i. 14 |
| | d. 20, 20 | | j. 19 |
| 4. | Tape diagram drawn to show equivalence | | |
| | | | k. 17 |
| | | | l. 11 |
| | | | m. 75 |
| | | | n. 118 |

Lesson 14

Problem Set

- 210 minutes
- 69 inches
- 10 gallons 3 quarts, or 43 quarts
- 80
- 72 bags
- 90 ounces
 - 3

Exit Ticket

160 minutes

Homework

- 175 minutes
- 8 feet 11 inches, or 107 inches
- 6 gallons 3 quarts, or 27 quarts
- 34
- 60 ounces
 - 6

Lesson 15

Problem Set

1. 152 square feet
2. 114 square feet
3. 240 square feet
6. Answers will vary.
7. 217 square feet
8. 25

Reflection

Answers will vary.

Homework

1. 192 square feet
2. 301 square yards
3. 96 square feet

Lesson 16

Problem Set

1. 314 square centimeters
2. 335 square centimeters

Reflection

Answers will vary.

Homework

1. 85 square centimeters
2. 948 square inches

Lesson 17

Problem Set

Convert Units: 120

Add Large Numbers: Answers provided

Subtract Large Numbers: Answers provided

Multiply Mentally: 96; 640; 736

Divide Mentally: Answers provided

State the Value of a Set of Coins: Answers provided

Break Apart 180° : Answers provided

Reflection

1. Answers will vary.
2. Answers will vary.
3. Answers will vary.

Homework

1. A. Point accurately plotted on number line; 2.9; $2\frac{9}{10}$; $\frac{1}{10}$ or 0.1
B. Point accurately plotted on number line; 4 ones and 4 tenths; $4\frac{4}{10}$; $\frac{6}{10}$ or 0.6
C. Answers will vary.
2. Answer provided.
 $8\frac{6}{10}$; 86 tenths or $\frac{86}{10}$; 860 hundredths or $\frac{860}{100}$
 $11\frac{7}{10}$; 117 tenths or $\frac{117}{10}$; 1170 hundredths or $\frac{1170}{100}$
 $4\frac{8}{10}$; 48 tenths or $\frac{48}{10}$; 480 hundredths or $\frac{480}{100}$

Lesson 18

Reflection

1. Answers will vary.
2. Answers will vary.