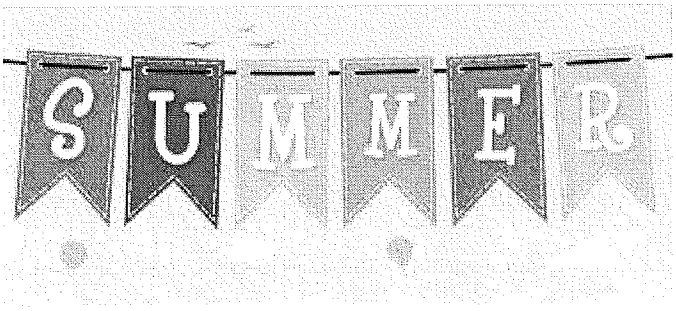
Fairfield Public Schools



Math Packet
ANSWER KEY

For

Students Entering Fifth Grade

ANSWER KEY

Use after Unit One, Session 10 (cont.)

Page 10, Centimeters, Decimeters & Meters (cont.)

3 **a** (challenge) Sherman crawled 237 cm farther than Sidney.

b (challenge) Explanations will vary. Example: *Sidney was faster because he would have gone 5 meters or 500 cm in an hour.*

Use after Unit One, Session 21

Page 11, Multiplication & Division Facts

1 24, 16, 42, 30, 24, 18, 0
8, 36, 36, 40, 15, 63, 48
9, 6, 9, 4
2, 6, 2, 7

2 18, 20, 35, 32, 64
2, 5, 3, 5, 8

3 (challenge) Responses will vary. Example: *Since 16 is 2 × 8, you can multiply the answer to 4 × 8 by 2 to get 4 × 16. 4 × 8 = 32 and 32 × 2 = 64, so 4 × 16 = 32.*

Page 12, Sandwiches, Pizza & Books

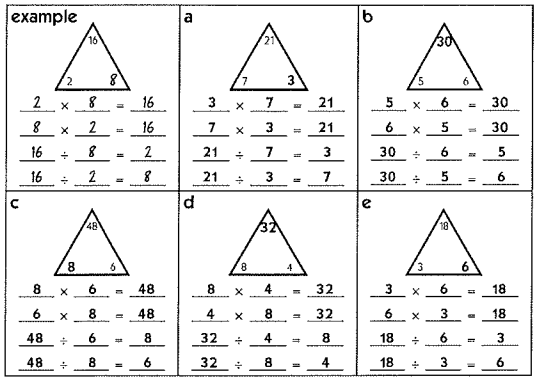
1 $18

2 4 pieces of pizza

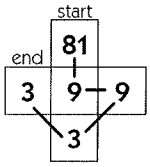
3 (challenge) 12,706 books

Page 13, All in the Family

1

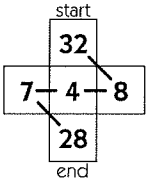


2 **a** (challenge)



81 ÷ 9 = 9
9 ÷ 3 = 3

b (challenge)



32 ÷ 8 = 4
4 × 7 = 28

Page 14, Flowers, Shells & Cards

1 24 flowers

2 6 shells

3 (challenge) 6 bundles

Page 15, Multiples & Multiplication Facts

1 **a** 9, 21

b 12, 24

c 27, 54

2 **a** 6, 8, 14, 10 should be circled.

b 8, 16, 20, 28 should be circled.

c 21, 14, 42, 35 should be circled.

d 32, 48, 16, 72 should be circled.

e 21, 18, 36, 12 should be circled.

3 81, 27, 16, 12, 56
8, 2, 6, 9, 4
(challenge) 12, 24, 48, 96, 192

Page 16, Tasty Treats

1 40 milkshakes

2 There are two possible answers:
2 cookies each, with 3 cookies left over OR
2½ cookies each

3 (challenge) 197 pounds of vegetables

Grade 4 Practice Book

ANSWER KEY

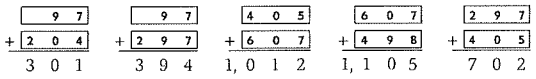
Use after Unit One, Session 10

Page 1, Multi-Digit Addition Review

1 327; 779; 962; 1,177
829; 1,513; 1,346; 7,818

2 **a** 1,262
b 1,896

3 (challenge)



Page 2, Addition Story Problems

1 561 pounds of apples

2 3,164 people

3 (challenge) 30,300 feet

Page 3, Multi-Digit Subtraction Review

1 135; 2,241; 91; 2,381
3,632; 6,192; 188; 2,918

2 **a** 38
b 7,293

3 **a** (challenge) 301 – 34 = 267 (This is just one possible solution; there are many.)
b (challenge) 674 – 352 = 322 (This is just one possible solution; there are many.)
c (challenge) 860 – 341 = 519

Page 4, Subtraction Story Problems

1 52 breakfast sandwiches

2 5,961 bags of potato chips

3 (challenge) 11,916 people were still at the game

Page 5, Add, Subtract & Multiply

1 $3.99; $27.26; $50.71; $15.17
$2.51; $1.58; $47.73; $1.78

2 **a** $7.11
b $502.43

3 24, 20, 27, 14, 0, 6
24, 28, 32, 0, 49, 20

Page 6, Shopping Problems

1 $5.34

2 $1.83

3 (challenge) $41.10

Page 7, Addition, Subtraction & Clock Problems

1 972; 904; 7,106; 575
3,918; 697; 2,198; 5,666

2 **a** 25 minutes
b 20 minutes
c (challenge) 15 minutes

Page 8, Miles, Books & Jellybeans

1 587 miles

2 385 books

3 (challenge) 783 jellybeans

Page 9, Round 'Em Up!

1 6,814; 1,006; 7,045; 4,275

2 **a** 50
b 50
c 40
d 90
e 120
f 860
g 270
h 990
i 1,250
j 2,050

3 **a** 200
b 300
c 800
d 400
e 100
f 200
g 800
h 400
i 700

4 **a–e** (challenge) Solutions will vary.

Page 10, Centimeters, Decimeters & Meters

1 **a** 280 centimeters
b 28 decimeters

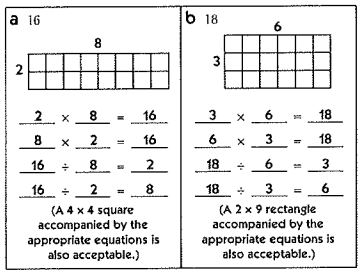
2 **a** 200
b 20
c 2

ANSWER KEY

Use after Unit One, Session 21 (cont.)

Page 17, Arrays & Factors

1



2 **a** 1, 2, 4, 8, 16

b 1, 17

c 1, 2, 3, 4, 6, 8, 12, 24

d 1, 3, 9

e 1, 2, 3, 4, 6, 9, 12, 18, 36

3 **a** 17 should be circled.

b 16, 9, and 36 should have squares around them.

4 **a** (challenge) 306 + 398 = 704

b (challenge) 623 – 446 = 177

Page 18, The Big Race & the Walk-a-Thon

1 3 hours

2 30 kilometers

3 4 groups of 8, or 8 groups of 4, or 16 groups of 2.

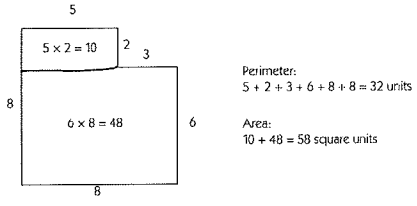
Page 19, Area & Perimeter

1 **a** Perimeter: 4 + 4 + 4 + 4 = 16 units;
Area: 4 × 4 = 16 square units

b Perimeter: 4 + 4 + 6 + 6 = 20 units;
Area: 4 × 6 = 24 square units

c Perimeter: 3 + 3 + 7 + 7 = 20 units;
Area: 3 × 7 = 21 square units

2 (challenge) Perimeter = 32 units
Area = 58 square units
Students' work will vary. Example:



Page 20, Area & Perimeter Story Problems

1 **a** 72 square feet

b 34 feet

2 **a** 28 square feet

b 22 feet

3 1,500 feet

Use after Unit Two, Session 10

Page 21, Place Value & Perimeter

1 **a** 9,248

b 17,633

c 32,058

2 **a** Hundreds, six hundred

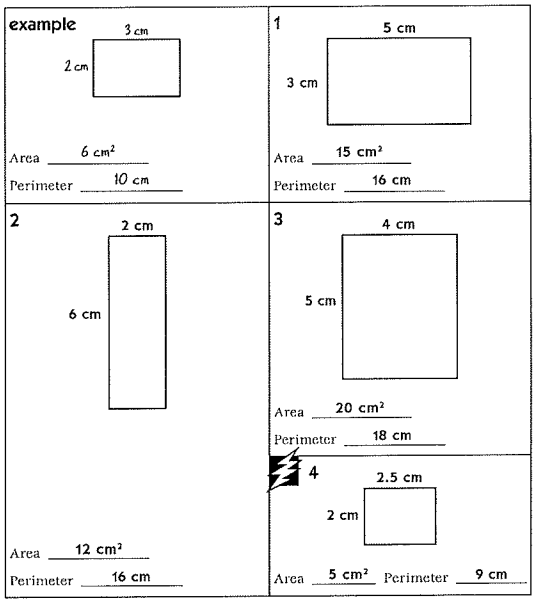
b Hundreds, zero

c Ten thousands, forty thousand

3 **a** 720 inches

b 962 inches

Page 22, Measuring to Find Area & Perimeter



Page 23, Multiplication & Division Practice

1 21, 16, 36, 25, 8, 54, 12

8, 4, 2, 8

6, 5, 8, 6

2 63, 0, 49, 5, 40

6, 8, 8, 4, 6

ANSWER KEY

Use after Unit Two, Session 10 (cont.)

Page 23, Multiplication & Division Practice (cont.)

3 40; 400; 4,000; 70; 700; 7,000
800; 50; 6,000; 20; 900; 0

4 (challenge) 100, 8, 10

Page 24, Multiplication & Division Story Problems

1 700 bags of dried apples

2 20 miles

3 6,000 footballs

4 (challenge) Students' work will vary. Possible equal groups are:

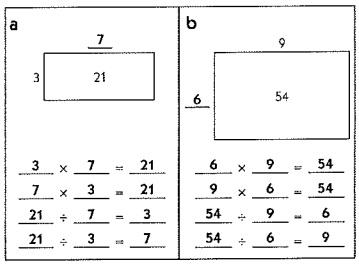
- 4 groups of 25 seashells
- 5 groups of 20 seashells
- 10 groups of 10 seashells
- 20 groups of 5 seashells
- 25 groups of 4 seashells
- 50 groups of 2 seashells

Page 25, Expanded Notation & Fact Families

1 a 20,456
b 32,112
c 7,046
d 96,035
e 63,007
f 13,855
g 50,305

2 a 1,000
b 300
c 7,000
d 30
e 400
f 60
g 400

3



Page 26, Money & Stadium Seats

1 $65.00

2 2504 empty seats

3 (challenge) $1,335.00 more

Page 27, Time after Time

1 Clock hands should show 7:35.

2 Clock hands should show 9:50.

3 Clock hands should show 5:20.

4 (challenge) Responses will vary. Example: *Clock hands that show 4:15 on the first clock and 5:40 on the second clock*

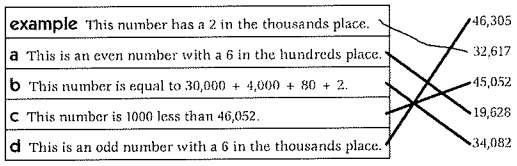
Page 28, Time & Distance Problems

1 a 1 hour and 10 minutes
b (challenge) 3:55 pm

2 a 1,000 centimeters each hour
b 10 meters
c (challenge) 15 meters; explanations will vary. Example: *Half of 10 is 5, so the spider will crawl 5 more meters in 1 and a half hours.*

Page 29, Number Riddles

1



2 a Thirty-three thousand, seventy-two
b Eighty-six thousand, one hundred five
c Seventy-four thousand, six hundred twenty-nine

3 (challenge) Answers will vary. Example: *5,730*

Page 30, The Arcade & the Animal Shelter

1 a Responses will vary. Example: *How much money does Rene have?*
b $2.25

2 a Responses will vary. Example: *How much money did Lin get for the shelter?*
b 75¢

Use after Unit Two, Session 21

Page 31, Counting Coins & Bills

1 a $0.66
b $0.50
c $0.17
d $0.75
e $0.61

ANSWER KEY

Use after Unit Two, Session 21 (cont.)

Page 31, Counting Coins & Bills (cont.)

2 **a** $3.47
b $1.74
c $1.12
d $5.85
e $3.91
f (challenge) $7.97
g (challenge) $16.45

Page 32, How Much Change?

1 $3.35
2 $6.11
3 (challenge) $4.06

Page 33, Multiplying with Money

1 **a** 75; students' work will vary.
b 105; students' work will vary.
2 **a** (challenge) 310; students' work will vary.
b (challenge) 315; students' work will vary.

Page 34, Money & Miles Per Hour

1 $60.00
2 39 miles
3 (challenge) $300.00

Page 35, Fill the Frames

1 10 5 4 | 4 x 10 = 40 | 4 x 5 = 20	40 + 20 = 60	4 x 15 = 60
2 10 7 3 | 3 x 10 = 30 | 3 x 7 = 21	30 + 21 = 51	3 x 17 = 51
3 10 6 5 | 5 x 10 = 50 | 5 x 6 = 30	50 + 30 = 80	5 x 16 = 80

Page 36, Apricots & Carrots

1 $1.35
2 $2.25
3 (challenge) 3 loads of laundry

Page 37, Addition & Multiplication Puzzles

1 **a**

			225
66	13	**100**	179
80	**50**	30	160
75	13	50	**138**
			166

2 **a**

			60
100	**2**	3	600
4	**2**	1,000	8,000
10	3	2	60
			400

3 **a** 2
b 10
c 8
d 2
e 100

Page 38, Candy & Video Games

1 **a** Responses will vary. Example: *How much money did Joya spend in all?*
b $2.24
2 **a** Responses will vary. Example: *How much money does Devante need?*
b $139.00

Page 39, Multiplication Puzzles

1

			60
3	**5**	**5**	75
7	2	**3**	42
6	2	**6**	72
			36

ANSWER KEY

Use after Unit Two, Session 21 (cont.)

Page 39, Multiplication Puzzles (cont.)

2

			60
5	5	**3**	75
3	4	5	60
5	5	**6**	150
			120

3

			100
4	**8**	5	160
2	5	**5**	50
4	3	**4**	48
			80

4 (challenge)

			240
7	2	20	280
5	**3**	4	60
4	6	**3**	72
			63

5 (challenge)

			120
3	**30**	**4**	360
7	6	10	420
5	25	**2**	250
			36

Page 40, The Information You Need

1 Emilio has $125. He wants to buy a new video game system that ~~usually costs $312 but~~ is on sale for $289. He wants to borrow money from his brother so that he can buy it while it is on sale. How much money will Emilio need to borrow to buy the game system while it is on sale?

a Responses will vary. Example: *How much money does Emilio need to borrow?*

b & c See above.

d $164.00

2 ~~Marie had a $5 bill, three $1 bills, 2 quarters, and 3 pennies in her pocket.~~ She bought a bottle of juice for 89¢ and an apple for 65¢. If she paid with two $1 bills, how much change did she get back?

a Responses will vary. Example: *How much change did Marie get?*

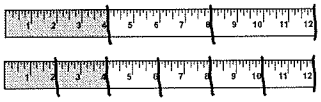
b & c See above.

d 46¢

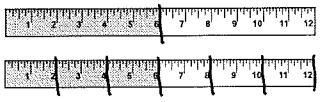
Use after Unit Three, Session 10

Page 41, Fractions of a Foot

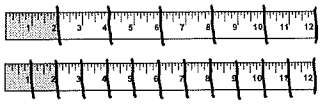
1 a $^1/_3$, $^2/_6$, $^4/_{12}$



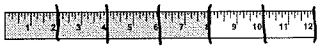
b $^1/_2$, $^3/_6$, $^6/_{12}$



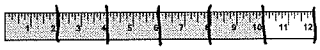
c $^1/_6$, $^2/_{12}$



2 a $^4/_6$, $^2/_3$



b $^5/_6$

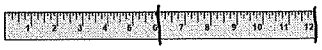


ANSWER KEY

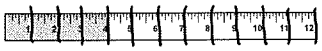
Use after Unit Three, Session 10 (cont.)

Page 41, Fractions of a Foot (cont.)

2 **c** $^2/_2$, $^3/_3$, $^4/_4$, $^6/_6$, $^{12}/_{12}$



d $^4/_{12}$, $^1/_3$



e $^8/_{12}$, $^4/_6$

Page 42, More Fractions of a Foot

1 **a** 6

b 3

c 2

d 4

2 **a** $^1/_3$ should be circled (4 inches, 3 inches)

b $^2/_3$ should be circled (8 inches, 6 inches)

c $^1/_2$ and $^3/_6$ should be circled (both are 6 inches)

d $^3/_4$ should be circled (8 inches, 9 inches)

e $^2/_3$ should be circled (3 inches, 8 inches)

3 **a** 1, 2, 3, 4, 6, 12

b 1, 3, 5, 15

c 1, 2, 3, 4, 6, 9, 12, 18, 36

d 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60

e (challenge) 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120

Page 43, Comparing Fractions on a Number Line

1 **a** $^2/_3$ should be circled; $^2/_3 > {}^2/_6$

b $^5/_6$ should be circled; $^5/_6 > {}^1/_3$

2 **a** $^3/_4$ should be circled; $^3/_4 > {}^2/_3$

b $^5/_6$ should be circled; $^5/_6 > {}^2/_3$

c $^5/_6$ should be circled; $^5/_6 > {}^3/_4$

Page 44, Egg Carton Fractions

1 6, 4, 3, 2

18, 8, 9, 10

2 **a** $^2/_6$

b $^1/_4$

c $^1/_2$

d $^5/_6$

e $^3/_4$

f $^4/_6$

3 **a** $^4/_6 = {}^2/_3$

b $^1/_3 > {}^1/_4$

c $^3/_4 < {}^5/_6$

d $^1/_3 < {}^3/_4$

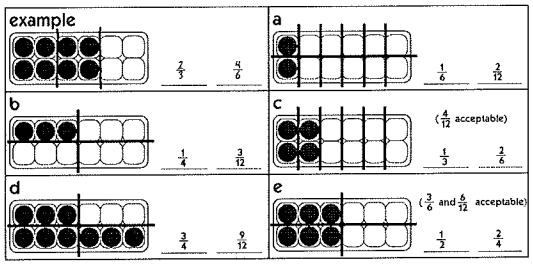
e $^1/_2 = {}^2/_4$

f $^2/_3 < {}^3/_4$

g $^2/_6 = {}^1/_3$

Page 45, More Egg Carton Fractions

1



2

Egg Carton	Mixed Fraction	Improper Fraction
example	$1\frac{1}{4}$	$\frac{5}{4}$
a	$1\frac{1}{3}$ ($1\frac{2}{6}$ or $1\frac{4}{12}$ acceptable)	$\frac{4}{3}$ ($\frac{8}{6}$ or $\frac{16}{12}$ acceptable)
b	$1\frac{2}{3}$ ($1\frac{4}{6}$ or $1\frac{8}{12}$ acceptable)	$\frac{5}{3}$ ($\frac{10}{6}$ or $\frac{20}{12}$ acceptable)

Page 46, Comparing & Ordering Fractions

1 $^1/_4$, $^1/_3$, $^1/_2$, $^2/_3$, $^3/_4$, $^3/_2$, $^5/_3$, $^7/_4$

2 $^1/_4$, $^1/_2$, $1^3/_4$, $2^1/_4$, 3

3 $^2/_3$, 2, $2^1/_3$

4 (challenge) $^8/_9$; explanations will vary. Example: *$^3/_4$ is $^1/_4$ less than 1. $^8/_9$ is $^1/_9$ less than 1. $^1/_4$ is more than $^1/_9$, so $^3/_4$ must be less than $^8/_9$.*

5 (challenge) $^5/_4$; explanations will vary. Example: *$^5/_4$ is the same as $1^1/_4$. $^{10}/_9$ is the same as $1^1/_9$. $^1/_4 > {}^1/_9$, so $^5/_4 > {}^{10}/_9$.*

Page 47, Fractions & Mixed Numbers on a Number Line

1 **a** $^3/_2$

b $1^2/_4$ ($1^1/_2$ is also acceptable)

c $1^1/_2$

d $3^1/_4$

e $^5/_2$

f $^8/_4$

2 (challenge) $^1/_2$

3 (challenge) $1^1/_2$

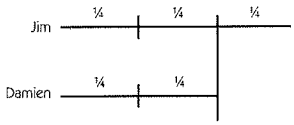
4 (challenge) $8^1/_2$

ANSWER KEY

Use after Unit Three, Session 10 (cont.)

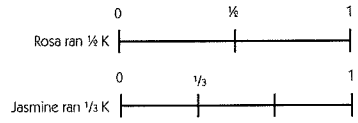
Page 48, Fraction Story Problems

1 Jim's string is $\frac{1}{4}$ of a foot longer than Damien's. Student work will vary. Example:

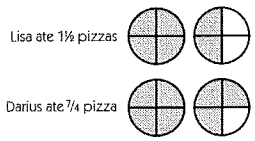


Jim's string = ¾ of a foot
Damien's string = ½ of a foot
Jim's string is ¼ of a foot longer than Darien's.

2 Rosa ran further than Jasmine. Student work will vary. Example:



3 (challenge) Darius ate $\frac{1}{4}$ more of a pizza than Lisa did. Student work will vary. Example:



Page 49, Clock Fractions

1 **a** 30
b 20
c 15
d 10

2 Note: *Other shadings are possible.*

Fractions	Picture on a Clock	How Many Minutes?
a $\frac{3}{4}$		45 minutes
b $\frac{2}{3}$		40 minutes
c $\frac{1}{6}$		10 minutes

Page 50, Time & Fractions

1 **a** Mai spent more time doing homework. (10 more minutes) Students' work will vary.
b 5:15; students' work will vary.
c 5:25; students' work will vary.

2 (challenge) It takes 10 more minutes to get to Ashley's aunt's house.

Use after Unit Three, Session 20

Page 51, Multiplication Tables

1 **a** 15, 6, 27, 9, 24, 18, 21, 12
b 20, 8, 36, 12, 32, 24, 28, 16
c 40, 16, 72, 24, 64, 48, 56, 32

2 8, 9, 4, 4
8, 8, 3, 3

3 (challenge) Answers will vary. Example: *376*

4 (challenge) Answers will vary. Example: $2 \times 376 = 752$

Page 52, Fractions & Division

1 **a** $\frac{1}{2}$
b $\frac{1}{4}$
c $\frac{1}{6}$

2 Each friend got $\frac{1}{3}$ of the cookie.

3 Each friend got $\frac{4}{3}$ or $1\frac{1}{3}$ cookies.

Page 53, More Multiplication Tables

1 32, 30, 49, 48, 36
7, 7, 5, 7, 9

2 **a** 50, 20, 90, 30, 80, 60, 70, 40
b 25, 10, 45, 15, 40, 30, 35, 20
c 45, 18, 81, 27, 72, 54, 63, 36

3 (challenge) 120, 60, 108, 180, 90, 162

Page 54, Classroom Groups

1 Each student got 3 erasers, and there were 2 erasers left over.

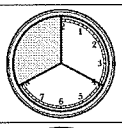
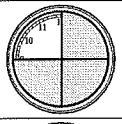
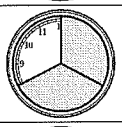
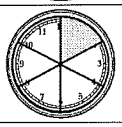
2 **a** 27 students
b (challenge) 9 groups of 3

ANSWER KEY

Use after Unit Three, Session 20 (cont.)

Page 55, Fractions of an Hour

Note: *Other shadings are possible.*

1 $\frac{1}{3}$		20 minutes
2 $\frac{3}{4}$		45 minutes
3 $\frac{2}{3}$		40 minutes
4 $\frac{1}{6}$		10 minutes

Page 56, More Time & Distance Problems

1 $\frac{1}{4}$ of an hour; 15 minutes

2 (challenge) 9 feet

Page 57, Fractions & Divison Tables

1 **a** $\frac{3}{4} < \frac{5}{6}$

b $\frac{2}{3} = \frac{4}{6}$

c $\frac{5}{3} > \frac{5}{4}$

d $\frac{2}{3} < \frac{3}{2}$

e $\frac{1}{3} < \frac{3}{6}$

2 **a** 9, 2, 8, 3, 5, 6, 4

b 6, 7, 5, 2, 9, 4, 8

c 5, 4, 9, 6, 7, 3, 8

Page 58, Sharing Problems

1 $9.50

2 8 shells each, with 2 shells left over

3 (challenge) 120 blocks

Page 59, Division Tables & Equivalent Fractions

1 **a** 8, 3, 4, 9, 7, 6, 5

b 6, 9, 7, 8, 4, 5, 3

c 9, 6, 5, 8, 7, 4, 3

2 **a** $\frac{1}{4}$, $\frac{3}{12}$

b $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{6}{12}$

c $\frac{3}{4}$, $\frac{9}{12}$

d $\frac{5}{6}$, $\frac{10}{12}$

e $\frac{1}{3}$, $\frac{2}{6}$, $\frac{4}{12}$

Page 60, Packages & Pizza

1 3 packages of muffins

2 10 packages of tennis balls (2 balls left)

3 (challenge) $2\frac{1}{4}$ pizzas

Use after Unit Four, Session 10

Page 61, Multiplying by 10, 100 & 1,000

1 50, 70, 400, 900

7,000; 6,000; 90; 5,000; 300

2 80; 40; 700; 500

3,000; 5,000; 1,000; 6

5, 8, 100, 10

(challenge) 1,000,000; 10; 100

Page 62, Money & Minutes

1 Brianna earns $1,000 per month at her job. ~~She used to make $800 per month~~. If she works only for the months of June, July, and August, how much money will she make?

a Responses will vary. Example: *How much money will Brianna make in 3 months?*

b & c See above.

d $3,000

2 ~~Jonah is 18 years old~~. It takes him 50 minutes to ride his bike to work and 50 minutes to ride his bike home every day. If he worked 6 days last week, how many minutes did he spend riding his bike to and from work?

a Responses will vary. Example: *How many minutes did Jonah spend riding his bike?*

b & c See above.

d 600 minutes

e (challenge) 10 hours

Page 63, Writing Improper Fractions as Mixed Numbers

1 35; 350; 350, 3,500

12; 120; 120; 1,200

56; 560; 560, 5,600

2 1, $1\frac{1}{3}$, $1\frac{2}{3}$

1, 1, $1\frac{6}{12}$ ($1\frac{1}{2}$ also acceptable)

1, 2, $1\frac{2}{6}$, ($1\frac{1}{3}$ acceptable), $1\frac{3}{6}$ ($1\frac{1}{2}$ acceptable)

(challenge) $1\frac{1}{4}$, 2, $3\frac{3}{4}$, 9

ANSWER KEY

Use after Unit Four, Session 10 (cont.)

Page 64, Area Problems

1 2,400 square inches

2 4,000 square feet

3 (challenge) 6,100 square inches

Page 65, Multiplication & Division Puzzles

1 6, 3, 9, 8, 5
2, 5, 4, 6, 9

2 a 81 ÷ 9 = 9
9 × 4 = 3
36 ÷ 6 = 6
6 × 7 = 42

start

81	× 6	− 36
÷ 6	9	4
7	− 42	9

end

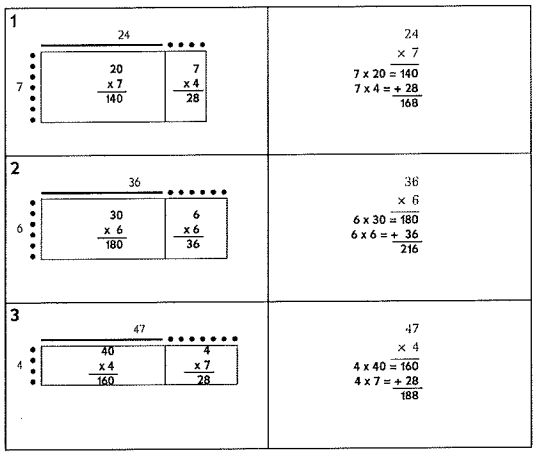
b 1 × 2 = 2
2 × 9 = 18
18 ÷ 3 = 6
6 ÷ 3 = 2

start end

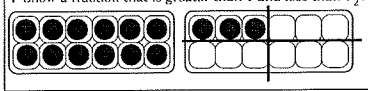
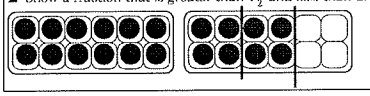
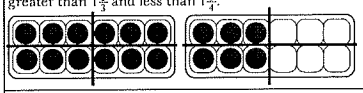
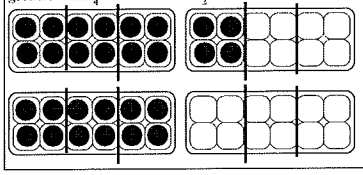
1	3	− 2
× 6	2	9
3	− 18	2

3 (challenge) 10, 4, 2, 3, 9, 90, 30, 20

Page 66, Using Partial Products to Solve Multiplication Problems



Page 67, Greater Than & Less Than

1 Show a fraction that is greater than 1 and less than $1\frac{1}{2}$. 	Answers will vary. Example: $1\frac{1}{4}$
2 Show a fraction that is greater than $1\frac{1}{2}$ and less than 2. 	Answers will vary. Example: $1\frac{2}{3}$ or $1\frac{4}{6}$
3 Show a fraction with 4 in the denominator that is greater than $1\frac{1}{3}$ and less than $1\frac{3}{4}$. 	$\frac{6}{4}$ or $1\frac{2}{4}$
4 Show a fraction with 3 in the denominator that is greater than $\frac{3}{4}$ and less than $1\frac{1}{2}$. 	$\frac{4}{3}$ or $1\frac{1}{3}$ $\frac{3}{3}$ also acceptable

Page 68, Using the Standard Multiplication Algorithm

1 a 258
b 112
c 236
d 111
e 252
f 264
g 340

2 a 411
b 2,674
c 2,910
d 584
e 1,392
f 715
g 2,030
h (challenge) 6,215
i (challenge) 14,124
j (challenge) 17,300
k (challenge) 31,302

Page 69, Two Different Multiplication Methods

1 a 224
b 235
c 168
d 2,247

ANSWER KEY

Use after Unit Four, Session 10 (cont.)

Page 69, Two Different Multiplication Methods (cont.)

1 **e** 2,892

f 777

2 Ramon bought 8 big cases of breakfast cereal. Each case held 12 boxes of cereal. ~~Each box of cereal held 18 oz. of cereal~~. How many boxes of breakfast cereal did Ramon buy?

a Responses will vary. Example: *How many boxes of cereal did Ramon get?*

b & c See above.

d 96 boxes of cereal

Page 70, Kylie's Babysitting Money

1 Kylie earns $8 an hour babysitting. ~~She babysat 21 hours last month~~. This month, she babysat 17 hours more than last month. How much more money did she earn this month?

a Responses will vary. Example: *How much more money did Kylie earn this month than she did last month?*

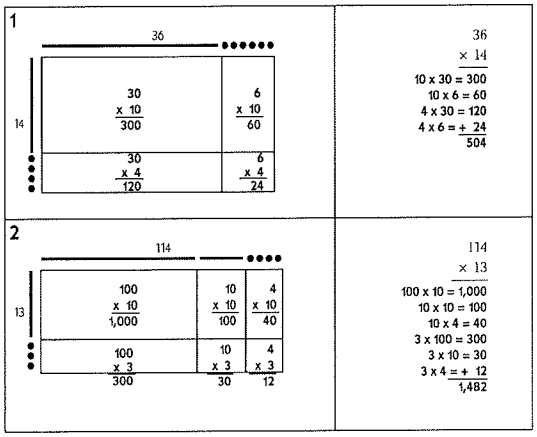
b & c See above.

d $136

2 (challenge) 32 hours; student work will vary.

Use after Unit Four, Session 21

Page 71, More Partial Products



Page 72, Toothpicks & Leaves

1 ~~Last year, there were 26 students in Mrs. Coleman's class~~. This year, there are 28 students in her class. They are doing an art project, and every student needs 17 toothpicks. How many toothpicks will they need altogether?

a Responses will vary. Example: *How many toothpicks do the kids need for the project?*

b & c See above.

d 476 toothpicks

2 ~~Leo is 11 years old~~. His neighbors pay him $12 to rake the leaves in their yards. He raked 23 yards in October and 15 yards in November. How much money did he earn in those two months?

a Responses will vary. Example: *How much money did Leo earn in 2 months?*

b & c See above.

d $456

Page 73, Reasonable Estimates & Partial Products

1 **a** 400 (first bubble)

b 600 (first bubble)

c 6,000 (third bubble)

d 3,000 (third bubble)

2 **a** 1,242

b 1,548

c 1,943

d 2,183

e 2,632

Page 74, Multiplication Story Problems

1 728 desks

2 1,750 sit-ups

3 (challenge) 672 seats

Page 75, Multiplication Round & Check

1 200; 300; 600; 400; 500; 2,000; 3,000; 6,000

2 **a** Estimate: 400; Solution: 369

b Estimate: 300; Solution: 288

c Estimate: 200; Solution: 216

d Estimate: 600; Solution: 504

e Estimate: 600; Solution: 726

f Estimate: 2,000; Solution: 1,854

g (challenge) Estimate: 3,600; Solution: 3,936

Use after Unit Four, Session 21 (cont.)

Page 76, Cherry Tomatoes & Cafeteria Tables

1 ~~Farmer Sara drives 32 miles each week~~ to take baskets of vegetables to her customers. She put 16 cherry tomatoes into each basket. She filled 23 baskets. How many cherry tomatoes did she use altogether?

- **a** Responses will vary. Example: *How many cherry tomatoes did it take to fill all the baskets?*
- **b & c** See above.
- **d** 368 cherry tomatoes

2 There are 24 tables in the cafeteria, and each table seats 17 students. ~~The cafeteria serves lunch from 11:45 am until 12:25 pm~~. How many students can sit in the cafeteria at a time?

- **a** Responses will vary. Example: *How many kids can sit in the cafeteria at the same time?*
- **b & c** See above.
- **d** 408 students

Page 77, Using the Standard Algorithm & Partial Products to Multiply

1 900; 1,200; 1,600; 4,000; 6,000; 8,000

2
- **a** 1,044
- **b** 1,634
- **c** 4,092
- **d** 7,245

Page 78, Raffle Tickets & Exercise Minutes

1 The middle school was giving away raffle tickets at Back to School Night. There were 48 classrooms altogether and ~~896 students at the school~~. Each classroom got a bundle of 108 tickets to give away. How many tickets did the classrooms get altogether?

- **a** Responses will vary. Example: *How many tickets were there to give away in all?*
- **b & c** See above.
- **d** 5,184 tickets

2 Deja exercises four days a week at the gym. ~~The gym is 7 blocks away from her house~~. Each time, she spends 45 minutes exercising. If she does this for 13 weeks, how much time will she spend exercising altogether?

- **a** Responses will vary. Example: *How many minutes will Deja spend exercising in 13 weeks?*
- **b & c** See above.
- **d** 2,340 minutes
- **e** (challenge) 39 hours and 0 minutes

Page 79, Using the Standard Algorithm to Multiply Large Numbers

1 4,800; 5,600; 6,400; 6,000; 12,000; 18,000

2
- **a** 5,928
- **b** 5,760
- **c** 4,602
- **d** 7,631
- **e** 15,652

Page 80, Bread & Paper

1 480 loaves of bread

2
- **a** (challenge) 12" × 8" or 4" × 24"
- **b** (challenge) 96 square inches

Use after Unit Five, Session 10

Page 81, More Fractions & Division

1
- **a** $1/4$
- **b** $3/4$
- **c** $1/8$
- **d** $3/8$
- **e** $5/8$
- **f** $1/3$
- **g** $2/3$

2 12, 6, 3, 8
120, 60, 30, 80

3
- **a** 8
- **b** 3
- **c** 6
- **d** 80
- **e** 120
- **f** 30
- **g** 60
- **h** (challenge) 18
- **i** (challenge) 160

Page 82, Favorite Fruit Graph

1 Watermelon

2 Peaches

3 Apples and strawberries

4 120 students

5 60 students

6 30 students

ANSWER KEY

Use after Unit Five, Session 10 (cont.)

Page 83, Spinner, Tile & Marble Fractions

1 a $1/2$
b $1/4$
c $1/3$
d $1/8$

2 a $2/8$ ($1/4$ acceptable also)
b $2/6$ ($1/3$ acceptable also)
c $3/6$ ($1/2$ acceptable also)
d $6/8$ ($3/4$ acceptable also)

3 a $3/9$ ($1/3$ acceptable also)
b $1/6$
c $3/10$

Page 84, Probability Experiments

1 $2/8$ or $1/4$ (Other acceptable answers include: 2 out of 8 chances, 1 out of 4 chances.)

2 Chris has a better chance of getting a gray tile from the large bowl than the small bowl. Explanations will vary. Example: *Half the tiles in the large bowl of 240 are gray because 120 is half of 240. Only $2/8$ or $1/4$ of the tiles in the small bowl are gray. So his chances are only 2 out of 8, which is less than 1 out of 2.*

3 $2/10$ or $1/5$ (Other acceptable answers include: 2 out of 10 chances, 1 out of 5 chances.)

4 a (challenge) 4 would need to be black. Explanations will vary. Example: *20 is twice as much as 10. If you want the chances to stay the same, you have to double the number of black marbles.*
$2 \times 2 = 4$.
b (challenge) 20 would need to be black. Explanations will vary. Example: *2 is $1/5$ of 10. 20 is $1/5$ of 100. The chances have to be 2 out of 10, or $1/5$.*

Page 85, Eating Our Vegetables

1 a 2 students
b 16 students
c 13 students
d Tuesday, Wednesday, and Friday
e (challenge) Friday; explanations will vary. Example: *$1/3$ of 24 is 8, so $2/3$ of 24 would be 16. Sixteen kids ate vegetables on Friday.*

2 100 students; explanations will vary. Example:
$1/4 + 1/3 = 7/12$
$12/12 - 7/12 = 5/12$
$240 \div 12 = 20$
$20 \times 5 = 100$

Page 86, Fair Spinners

1 a Choice 3, the half and half spinner
b Yes; explanations will vary. Example: *4 parts of the spinner are labeled A and 4 parts are labeled B. The parts are the same size, so it's fair.*

2 a Responses will vary. Example: *If you split the spinner into 3 equal parts, each boy has an equal chance.*

2 b Responses will vary. Example: *Split the spinner into 6 equal parts, and give each color 2 parts. That way, each boy has a 2 out of 6 chance of landing on his color.*

Page 87, Multiplication & Division Practice

1 a 4,760
b 11,661
c 9,248
d 11,392
e 17,347
f 11,175
g 25,929

2 8, 9, 8
7, 8, 7
8, 3, 6

3 (challenge) 27, 14, 16

Page 88, Area & Perimeter, Time & Money

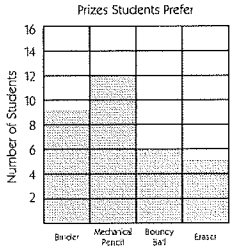
1 Area = 2,800 square inches
Perimeter =240 inches

2 a 10 hours
b $120

Use after Unit Five, Session 10 (cont.)

Page 89, Prizes for Student Helpers

1



2 **a** $24.95

b $40.00

c $6.50

d $1.25

3 $72.70; students' work will vary.

Page 90, Probability Experiments with Tile & Marbles

1 **a** $^4/_8$ (Other acceptable responses include $^1/_2$, 1 out of 2, half, 4 out of 8.)

b 120; explanations will vary. Example: *4 out of 8 is half, so to keep the probability the same, half the tiles have to be white. Half of 240 is 120.*

2

Problem	Color in the Marbles	Number of Black Marbles
a Ling wants to make a collection of marbles where the chance of pulling out a black marble is $\frac{1}{3}$. Color in some of the 36 marbles to show how many should be black.	●●○○○○○○○ ●●○○○○○○○ ●●○○○○○○○ ●●○○○○○○○	12
b Ling wants to change the collection of marbles so that it is twice as likely as it was with the collection above that she will pull out a black marble. Color in some of the 36 marbles to show how many should be black.	●●●●●●○○○ ●●●●●●○○○ ●●●●●●○○○ ●●●●●●○○○	24
c Ling wants to change the first collection of marbles so that the chances of pulling out a black marble are half what they were with the first collection. Color in some of the 36 marbles to show how many should be black.	●●○○○○○○○ ●●○○○○○○○ ○○○○○○○○○ ○○○○○○○○○	6

Use after Unit Five, Session 18

Page 91, Calendar Problems

1 Answers and explanations will vary. Example: *No. If you check the calendar, it's 7 weeks and 1 day until Hannah's birthday.*

2 Thursday, March 5th

3 Sunday, March 22nd

4 February 26 (third bubble)

5 (challenge) Five Sundays

Page 92, Dog Bone Graph

1 10 bones

2 5 bones

3 Friday

4 35 bones

5 170 bones

6 (challenge) 85 bones

Page 93, Division & Elapsed Time

1 4, 7, 9, 4
9, 8, 9, 4
7, 6, 8, 9

2 5:15

3 4:15

4 1 hour and 10 minutes

5 55 minutes

Page 94, Estimating to Decide if Your Answer Is Reasonable

1 **a** More than 200 dictionaries, but less than 400 (Choice 3)

b 276 dictionaries

c Answers and explanations will vary. Example: *Yes, because 20 × 12 = 240, and 23 × 12 is close to 20 × 12.*

2 28,000; 21,000; 3,600; 16,000,000; 420,000

Page 95, Multi-Digit Multiplication Practice

1 2,100; 2,800; 3,500; 21,000; 28,000

2 **a** 3,796

b 3,264

c 2,412

d 19,684

e 27,560

Page 96, Darryl's Present

1 **a** Estimates will vary. Example: *5 hours*

b Estimates will vary. Example: *10 hours*

2 7 hours

3 Answers will vary. Example: *Yes, because he already made about $100 by working 8 hours. Working 7 hours seems like a good answer because he only needs a little more than $80 more to buy the present.*

ANSWER KEY

Use after Unit Five, Session 18 (cont.)

Page 97, Enough Information to Solve the Problem?

Problem	Is there enough information to solve the problem?	If there is not enough information, what information is missing?
1 Cody wants to buy a new pair of shoes that cost $65. His neighbors pay him to mow their lawns. If he earns $10 for each lawn, will he have enough money to buy the shoes this week?	No	Answers will vary. Example: How many lawns is he going to mow this week?
2 Jenna went to the store with a $10 bill. She bought 3 apples that each cost 65¢ and a carton of milk that cost $1.85. How much change will she get back?	Yes	N/A
3 There are 6 clusters of desks and 22 students in Mr. Fletcher's classroom. How many empty seats are there in his classroom?	No	Answers will vary. Example: How many desks are in each cluster?
4 Kiyoshi is making bags of art supplies to give away as prizes on Back to School Night. If he puts 3 erasers in each bag, how many bags can he fill?	No	Answers will vary. Example: How many erasers did he start with?
5 Salvador is making batches of cookies. He baked 6 batches of 8 cookies and a final batch of 4 cookies. How many cookies did he bake altogether?	Yes	N/A

Page 98, Choosing a Strategy

1 a Answers will vary, but draw a picture makes the best sense.

b Explanations will vary depending on the strategy selected. Example: *I chose "draw a picture" because the problem is about shapes. It seems easiest to solve the problem with a picture.*

c Width = 5 cm; length = 7 cm

d Responses will vary.

Page 99, Find the Missing Information

1 a The bread cost $2. (second bubble)

b $3.70

2 a Lisa's room is 9 ft. by 11 ft. (second bubble)

b Lisa will need 25 packages of carpet squares, even though there will be one square left over. It will cost her $125.

Page 100, Family Math Night

1 a Estimates will vary. Example: *6:15*

b 6:05

c Answers will vary. Example: *Yes, because 1 1/2 hours plus 20 minutes is about 2 hours, and 45 minutes more is almost 3 hours. If it took 3 hours, they would finish at 6:30, but it was a little less than 3 hours.*

Use after Unit Six, Session 10

Page 101, Fractions & Mixed Numbers

1 a $1/4$, $2/8$

b $3/4$, $6/8$

c $1/3$, $2/6$

d $2/3$, $4/6$

e $2/2$, $4/4$

2 a $9/4$, $2\,1/4$ ($18/8$, $2\,2/8$ also acceptable.)

b $7/3$, $2\,1/3$ ($14/6$, $2\,2/6$ also acceptable.)

c $5/3$, $1\,2/3$ ($10/6$, $1\,4/6$ also acceptable.)

3 a $4\,1/2$

b $2\,1/4$

c $3\,2/4$ ($3\,1/2$ also acceptable.)

d $7/2$

e $11/4$

f (challenge) $20\,2/3$

g (challenge) $91/3$

Page 102, Pizza Problems

1 Lucy ate $1/8$ of a pizza more.

2 The Suarez family ate $5/8$ of a pizza more.

3 (challenge) $82/8$ is greater than $37/4$. Explanations will vary.

Page 103, Using Fractions on a Number Line to Solve Problems

1 a Jade

b Lester's

c Table B

2 $1/12$, $1/4$, $1/2$, $3/4$, $7/8$, $7/6$

3 a $3/6 < 3/4$

b $5/6 > 3/4$

c $5/6 > 2/3$

d $5/4 > 5/6$

e $5/4 < 4/3$

f $11/6 > 5/3$

g (challenge) $10/9 > 101/100$

Page 104, Time Conversions

1 a 60

b 60

c 24

d 7

e 365

f 52

2 3,600 seconds

ANSWER KEY

Use after Unit Six, Session 10 (cont.)

Page 104, Time Conversions (cont.)

3 1,440 minutes

4 36 hours

5 4,380 days (not counting leap years)

6 (challenge) 28,470 days (not counting leap years)

Page 105, Showing Fractions in Simplest Form

1 a 1, 2, 4

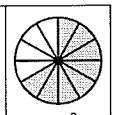
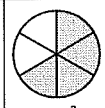
b 1, 2, 4, 8

c 1, 3

d 1, 2, 3, 6

e 1, 2, 3, 4, 6, 12

2

a $\frac{8}{12}$	1, 2, 4, 8	1, 2, 3, 4, 6, 12	4	$\frac{8}{12} \div \frac{4}{4} = \frac{2}{3}$	 $\frac{8}{12} = \frac{2}{3}$
b $\frac{4}{6}$	1, 2, 4	1, 2, 3, 6	2	$\frac{4}{6} \div \frac{2}{2} = \frac{2}{3}$	 $\frac{4}{6} = \frac{2}{3}$

Page 106, Weight Conversions

1 a 16

b 2,000

2 a 240 ounces

b 184 ounces

c 2,800 ounces

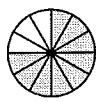
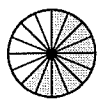
d 10,000 pounds

e (challenge) 160,000 ounces

f (challenge) 150 tons

Page 107, Simplifying Fractions

1

a $\frac{9}{12}$	1, 3, 9	1, 2, 3, 4, 6, 12	3	$\frac{9}{12} \div \frac{3}{3} = \frac{3}{4}$	 $\frac{9}{12} = \frac{3}{4}$
b $\frac{10}{16}$	1, 2, 5, 10	1, 2, 4, 8, 16	2	$\frac{10}{16} \div \frac{2}{2} = \frac{5}{8}$	 $\frac{10}{16} = \frac{5}{8}$

2 a $\frac{9 \div 3}{15 \div 3} = \frac{3}{5}$

b $\frac{6 \div 2}{16 \div 2} = \frac{3}{8}$

c $\frac{8 \div 4}{12 \div 4} = \frac{2}{3}$

Page 108, Capacity Conversions

1 a 8

b 2

c 2

d 4

e 4

f 8

2 a 16 cups

b 128 ounces

c 600 quarts

d 19,200 ounces

Page 109, Fraction Practice

1 $10\frac{1}{4}$, $10\frac{3}{4}$, $11\frac{1}{3}$, $11\frac{2}{3}$

2 a 11 miles

b No; explanations will vary. Example: *$11\frac{1}{4}$ miles is closer to 11 than 12.*

c Frank

3 1, 10, 11,

1, 10, 11, $11\frac{2}{3}$,

$11\frac{1}{2}$, $10\frac{1}{3}$, $10\frac{2}{4}$ or $10\frac{1}{2}$, $9\frac{2}{3}$

4 a $\frac{6 \div 3}{21 \div 3} = \frac{2}{7}$

b $\frac{8 \div 4}{36 \div 4} = \frac{2}{9}$

Page 110, Length Conversions

1 a 12

b 3

c 36

d 5,280

2 a 144 inches

b 150 feet

c 1,800 inches

d 42,240 feet

e (challenge) Estimates will vary. Example: *1,750 yards*

f (challenge) 1,760 yards

Use after Unit Six, Session 22

Page 111, Decimals & Fractions

1 a Tenths

b Ones

ANSWER KEY

Use after Unit Six, Session 22 (cont.)

Page 111, Decimals & Fractions (cont.)

1 c Hundreds
d Hundredths
e Tenths

2 a 6.07
b 265.8

3 a 0.7 or .7
b 3.05
c 0.04 or .04
d 4.38
e 1.09
f 1.9

4 a $1.12 < 1.2$
b $3.5 > 3.48$
c $23.81 < 23.85$
d $4.50 = 4.5$
e $3.06 < 3.65$

Page 112, Running Problems

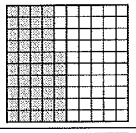
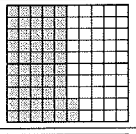
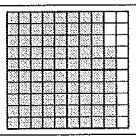
1 a 9.56 seconds
b Less than twice as long; explanations will vary. Example: *If it had taken him twice as long to run 200 meters, his time would have been 9.86 + 9.86, which equals 19.72. 19.42 is less than 19.72*

2 Steven is 0.12 seconds away from tying the world record. Students' work will vary.

3 It took her 0.75 seconds longer. Students' work will vary.

Page 113, Using Pictures to Compare Decimals & Fractions

Note: *Other shadings are possible.*

1 0.46		$0.46 > \frac{1}{4}$ $0.46 < \frac{1}{2}$ $0.46 < \frac{3}{4}$
2 0.52		$0.52 > \frac{1}{4}$ $0.52 > \frac{1}{2}$ $0.52 < \frac{4}{4}$
3 0.87		$0.87 > \frac{1}{4}$ $0.87 > \frac{1}{2}$ $0.87 > \frac{3}{4}$

Page 114, From Home to School & Back

1 a $0.15
b $3.30

2 a 3.4 miles
b (challenge) 17 miles

3 (challenge) 2.95 miles

Page 115, Ordering Decimals & Fractions

1 a 0.5
b 0.50
c 0.75
d 0.25
e 0.5 or 0.50
f 0.75
g 1 or 1.0

2 a

less than $\frac{1}{4}$	between $\frac{1}{4}$ and $\frac{1}{2}$	between $\frac{1}{2}$ and $\frac{3}{4}$	greater than $\frac{3}{4}$
0.06 0.15	0.28 0.3	0.6 0.71	0.92 0.8

b 0.06, 0.15, 0.28, 0.3, 0.6, 0.71, 0.8, 0.92

3 0.08, 0.23, $\frac{1}{4}$, 0.3, $\frac{3}{4}$, 0.78, $\frac{9}{10}$

4 0.02, $\frac{1}{3}$, $\frac{5}{4}$, $1\frac{1}{2}$, 2.25, $\frac{10}{4}$, 3.6

Page 116, Pencils & Paint

1 No (Keiko needs $2.95 more to buy 5 boxes of pencils)

2 (challenge) $595.20 ($620 if they only buy gallons)

Page 117, Rounding Decimals & Fractions to the Nearest Whole Number

1 0.25, $\frac{3}{4}$, 1.05, $\frac{9}{5}$

2 0.75, $\frac{7}{5}$, $5\frac{7}{10}$, 7.05

3 a 0
b 1
c 2
d 1
e 7
f 6
g 7
h 8

4 a (challenge) 38
b (challenge) 74
c (challenge) 27
d (challenge) 401

ANSWER KEY

Use after Unit Six, Session 22 (cont.)

Page 118, Decimal & Fraction Story Problems

1 Yes; explanations will vary. Example: *2.4 = 2 4/10. 4/10 > 1/4, so 2.4 pounds will be more than enough.*

2 No; explanations will vary. Example: *3 3/4 = 3.75, and .75 > .6, so 3.6 pounds is not enough.*

3 Yes; explanations will vary. Example: *13 1/2 = 13.5. 13.8 > 13.5, so they can stop now.*

Page 119, Comparing Decimals & Fractions

1

a 0.12 $\frac{2}{10}$	$\frac{12}{100}$ and $\frac{20}{100}$	0.12 and 0.20	0.12 < $\frac{2}{10}$
b $\frac{56}{100}$ 0.5	$\frac{56}{100}$ and $\frac{50}{100}$	0.56 and 0.50	$\frac{56}{100}$ > 0.5
c 0.04 $\frac{9}{100}$	$\frac{4}{100}$ and $\frac{9}{100}$	0.04 and 0.09	0.04 < $\frac{9}{100}$
d $\frac{8}{100}$ 0.3	$\frac{8}{100}$ and $\frac{30}{100}$	0.08 and 0.30	$\frac{8}{100}$ < 0.3

2

a $\frac{2}{3}$ < 0.75	b 0.5 = $\frac{50}{100}$	c 0.7 > $\frac{1}{2}$
d $\frac{8}{10}$ > 0.08	e $\frac{6}{100}$ < 0.6	f 0.5 > $\frac{3}{10}$
g 4.3 < $\frac{9}{2}$	h 3.05 > $\frac{6}{2}$	i $\frac{5}{4}$ = 1.25
j 2.50 = $2\frac{1}{2}$	k $\frac{10}{5}$ < $2\frac{1}{4}$	l $\frac{12}{4}$ > 2.75

3 (challenge)

a 3.5 > $\frac{305}{100}$	b $\frac{48}{100}$ > 0.3	c 0.29 < $\frac{29}{10}$	d $\frac{150}{200}$ > 0.3

Page 120, More Decimal & Fraction Story Problems

1 Yes; explanations will vary.
Example: *1.15 + 1.56 = 2.71. 2.71 is more than 2 1/2 pounds, so Elisa will have enough.*

2 Ming; explanations will vary.
Example: *Ming ran 8.6 miles. Enrico ran 8 1/2 miles. 8.6 > 8 1/2 so Ming ran farther.*

Use after Unit Seven, Session 10

Page 121, Area Problems

1 105 square inches, students' work will vary.

2 210 square inches, students' work will vary.

3 700 square inches, students' work will vary.

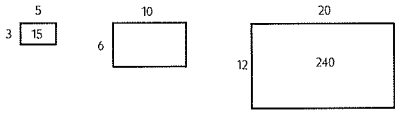
4 (challenge) 294 square inches, students' work will vary.

Page 122, Thinking about Area

1 a 9
b 18
c 36
d 72
e Responses will vary. Example: *The area is twice as big.*

2 a 128
b 64
c 32
d 16
e Responses will vary. Example: *The area is cut in half each time.*

3 (challenge) Responses will vary. Example: *When you double the length of both dimensions, the area is 4 times as big from one to the next.*



Page 123, Solving Equations

1 a 12
b 11
c 8
d 42
e 48
f 86

2 a 8
b 20
c 7
d 100
e 5
f 14
g 7
h 7

3 (challenge) Responses will vary. Examples:
a a + *10* = *15*
b *100* = *20* × a
c *50* ÷ a = *10*
d *3* = a – *2*

Use after Unit Seven, Session 10 (cont.)

Page 124, Writing & Solving Equations

1 Alana had 25 seashells. She gave some to her sister. Now she has 12 seashells. How many seashells did she give her sister?	25 – ☐ = 12	25 – s = 12	She gave her sister 13 shells. s = 13
2 George put apples into bags to sell at the farmers market. He put 5 apples into each bag. He had 45 apples altogether. How many bags did he fill?	45 ÷ 5 = ☐	45 ÷ 5 = a	He put 9 apples in each bag. a = 9
3 Mr. James had 16 bookmarks to give to the 4 students in his reading group. How many bookmarks did each student get if they all got the same number of bookmarks?	16 ÷ 4 = ☐	16 ÷ 4 = b	Each kid got 4 bookmarks. b = 4
4 Serafina had 30 stickers. She gave the same number of stickers to each of her 3 friends. Now she has 18 stickers left. How many stickers did she give to each friend?	30 – (3 x ☐) = 18	30 – (3 x s) = 18	She gave 4 to each friend. s = 4

Page 125, What's the Rule

1	a	Pattern 3, 6, 12, 24, 48, 96
	b	Rule: Double the number.
2	a	Pattern 16, 8, 4, 2, 1, ½
	b	Rule: Divide the number in half.
3	a	Pattern 6.13, 7.26, 8.39, 9.52, 10.65, 11.78
	b	Rule: Add 1.13 each time
4	a	Pattern $2\frac{1}{8}, 3\frac{1}{4}, 4\frac{3}{8}, 5\frac{1}{2}$, $6\frac{5}{8}$, $7\frac{3}{4}$, $8\frac{7}{8}$
	b	Rule: Add 1⅛ each time.
5	a	Pattern $\frac{18}{9}, \frac{15}{9}, 1\frac{1}{3}, 1$, ⅔ (6/9), ⅓ (3/9), 0
	b	Rule: Subtract ⅓ or ⅓ each time.

Page 126, Number Patterns & Divisibility

1 a 14, 16, 18, 20, 22, 24
  b 30, 35, 40, 45, 50, 55
  c 50, 60, 70, 80, 90, 100

2 Responses will vary. Examples:
  a *All the count-by-2 numbers are even. They all end in multiples of 2.*
  b *All the count-by-5 numbers end in 0 or 5.*
  c *All the count-by-10 numbers end in 0. They are also all even.*

3 a 40: yes, yes, yes
  b 75: no, yes, no
  c 37: no, no, no
  d 110: yes, yes, yes
  e 364: yes, no, no
  f 930: yes, yes, yes
  g 361: no, no, no
  h 576: yes, no, no
  i 785: no, yes, no

Page 127, Ounces, Cups, Pints, Quarts & Gallons

1 a 8
  b 2
  c 2
  d 4
  e 4
  f 8

2 640 ounces

3 (challenge) 7 pints (112 ounces, 14 cups, or $3\frac{1}{2}$ quarts are also acceptable responses.)

Page 128, Find or Write the Matching Equation

1

a Nina had 2 cats. They had kittens and now Nina has 8 cats. How many kittens did they have?	$8 \div k = 2$
b Tim had 8 kites. He gave them to his friends. Each friend got 2 kites. How many friends did Tim give kites to?	$8 - k = 2$
c Kaylee had 8 keys on her keychain. She got rid of some of them, and now she has 2 keys left. How many keys did she get rid of?	$2 \times k = 8$
d Takumi was tying knots. He tied the same number of knots on 2 different pieces of string. When he was done, he had tied 8 knots. How many knots did he tie on each piece of string?	$2 + k = 8$

2 The letter students use to represent the unknown amount may vary. Examples:
  a $30 \div 5 = r$
  b $9 \div 3 = b$
  c $\$45 - m > \$30$

Page 129, Thinking about Number Patterns

1 a 42, 44, 46, 48, 50, 52
  b 60, 65, 70, 75, 80, 85
  c 90, 100, 110, 120, 130, 140

2 Responses will vary. Examples:
- *It must be even.*
- *It must be a multiple of 10.*
- *It must be divisible by 2.*

3 (challenge) Responses and explanations will vary. Example: *I agree with Nia because 2 × 3 = 6, so any multiple of 6 must also be a multiple of both 2 and 3. If you look at the first few multiples of 6, for example (6, 12, 18, 24, 30, 36, and 42), they're all even, so they have to be multiples of 2. You can divide them all by 3, so they're all multiples of 3 as well.*

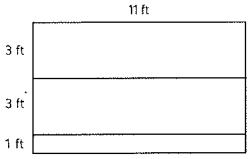
ANSWER KEY

Use after Unit Seven, Session 10 (cont.)

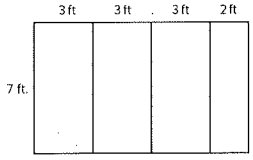
Page 130, The Paper Problem

1 Drawings will vary. Examples:

a



b



2 (challenge) Responses will vary. Example: *The first way shown above wastes a 2′ × 11′ piece of paper or 22 square feet. The second way shown above wastes a 2′ × 7′ piece of paper, or 14 square feet. The second way wastes less paper.*

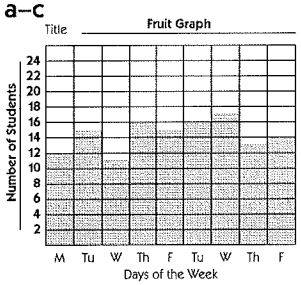
Use after Unit Eight, Session 10

Page 131, The Vegetable Eating Contest

1 2 students
2 15 students
3 Friday
4 Tuesday, Wednesday, Thursday
5 Responses will vary. Example: *Room 108 did a better job because there was only 1 day more kids from that class ate less vegetables. On all the other days, they ate more or the same amount. For the whole week, the kids from 106 only ate vegetables 61 times, and the kids from 108 ate vegetables 71 times.*

Page 132, Room 108's Fruit Graph

1 a–c



2 a 11, 12, 13, 14, 15, 15, 16, 16, 17
b 17 – 11 = 6
c There are 2 modes: 15 and 16
d 15

Page 133, Two Different Kinds of Data

1 Numerical; A
2 Categorical; D
3 Categorical; B
4 Numerical; C

Page 134, How Tall Are We?

1 50, 51, 52, 52, 52, 53, 53, 54, 54, 57, 60
2 a 60 – 50 = 10 inches
b Responses will vary. Example: *The tallest friend was 10" taller than the shortest friend.*
3 a 52 inches
b Responses will vary. Example: *The height that was most common is the group was 52".*
4 a 53 inches
b Responses will vary. Example: *Half of the friends were 53" or taller, and half were 53" or shorter.*

Page 135, Estimate or Exact Measurement?

1 a E
b M
c E
d M
e M
2 Responses will vary.
3 Responses will vary.

Page 136, Multiplication Review

1 a 15, 6, 27, 9, 24, 18, 21, 12
b 35, 14, 63, 21, 56, 42, 49, 28
c 45, 18, 81, 27, 72, 54, 63, 36
2 8, 7, 5, 8, 6
3 9, 3, 7, 6
4 282; 2,002; 1,417; 40,932

Page 137, Decimal & Fraction Riddles

1 a 0.25
b 0.75
c 0.7
d 0.02
e 0.30
f 0.53
g 2.06
h 3.25

ANSWER KEY

Use after Unit Eight, Session 10 (cont.)

Page 137, Decimal & Fraction Riddles (cont.)

2 **a** $^3/_2 = 1.5$

b $0.6 > {}^9/_{100}$

c $^{36}/_{100} > 0.25$

d $0.75 = {}^9/_{12}$

e $83^1/_2 > 83.48$

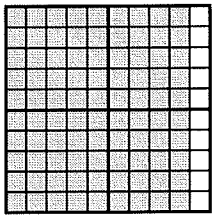
f $^{125}/_{100} > 1.07$

g $^{82}/_{100} < 0.9$

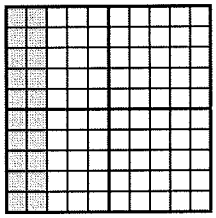
h $74^3/_4 < 74.8$

3 Responses will vary. Examples:

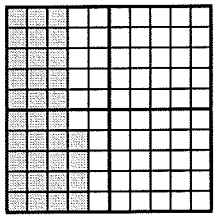
a *0.90*



b *0.20*



c *0.34*

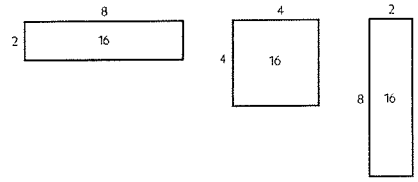


Page 138, Jeff's Wallpaper Problem

1 328 square feet

2 90 square feet

3 (challenge) The area stays the same.



Page 139, Multiplication, Area & Perimeter Review

1 **a**

			56
1	6	**7**	**42**
4	2	**4**	32
4	1	**9**	36
			18

1 **b**

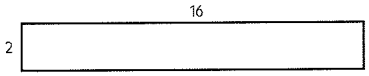
			0
7	3	**0**	0
4	2	**9**	72
5	3	3	45
			42

2 **a** Area = 1,862 square units
Perimeter = 174 units

b Area = 15,038 square units
Perimeter = 558 units

c Area = 11,164 square units
Perimeter = 474 units

3 (challenge)



Perimeter: (2 × 2) + (2 × 16) = 36 units
Area: 2 × 16 = 32 square units

Page 140, Tiling the Kitchen Floor

1 Jean and Mike are covering their kitchen floor with big tiles. The floor is 21 feet long and 17 feet wide. The tiles they are using are each 1 foot wide and 3 feet long. ~~Each tile weighs 5 pounds~~. The tiles come in packages of 10 that each cost $120. How much will it cost them to cover their floor with these tiles?

a Responses will vary. Example: *How much will Jean and Mike have to pay for the tiles they need?*

b & c See above.

d $1,440.00

ANSWER KEY

Use after Unit Eight, Session 10 (cont.)

Page 140, Tiling the Kitchen Floor (cont.)

2 Responses will vary. Example: *The floor is 357 square feet. The tiles are 3 square feet. If you divide 360 by 3, you get 120. That's 12 packages of 10 tiles. 12 × 120 = $1,440.00 so I know I'm right, even though they'll have one tile left over.*