

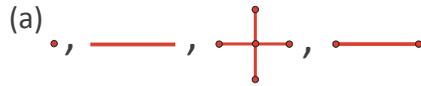
Math 3

Answer Key



Lesson 1—Mathematician: Euclid

Lesson Answers:



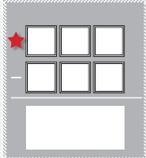
Bonus Activity Answers:



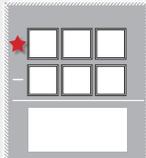
Roll the three dice from the Math Activity Box to create a three-digit number. Write this number on your dry-erase board. Roll the dice again to create a second number. Determine which number is larger. Put the larger number's digits in the boxes next to the red star. Put the smaller number's digits in the boxes next to the minus sign. Find the difference. Repeat this process to complete the worksheet. *Note: If you roll a two-digit number (0, 11, or 12), discard the "1" from the tens place and only use the number in the ones place.*

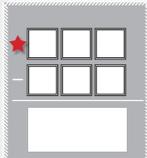


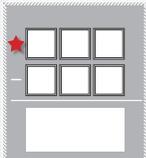




Answers will vary.







Circle the answers above that are even. Then list all the answers in order from least to greatest.



Lesson 2—Introduction to Multiplication

Daily Dose

Solve:

$\begin{array}{r} 54 \\ + 37 \\ \hline 91 \end{array}$	$\begin{array}{r} 27 \\ + 69 \\ \hline 96 \end{array}$	$\begin{array}{r} 195 \\ + 285 \\ \hline 480 \end{array}$	$\begin{array}{r} 383 \\ + 985 \\ \hline 1,368 \end{array}$
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Skip Counting by 4s: Complete. Then recite five times.

4, 8, 12, 16, 20, 24, 28, 32, 36, 40

Lesson Answers:

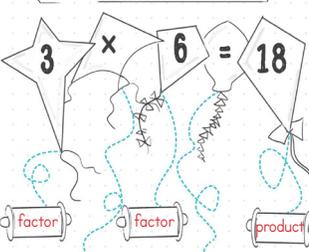
- (a) 12 (b) 20 (c) 24, 24 (d) $6 + 6 + 6 + 6 + 6 = 30$, $5 \times 6 = 30$ (e) $8 + 8 + 8 = 24$, $3 \times 8 = 24$
 (f) $5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = 40$, $8 \times 5 = 40$
 (g) $6 \times 2 = 12$, $5 \times 4 = 20$, $3 \times 9 = 27$, $7 \times 5 = 35$

My Math Journal Answers: Page 30

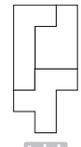
MULTIPLICATION

Multiplication is...

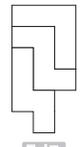
adding equal groups together to find the total amount.



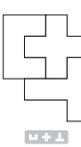
Bonus Activity Answers:



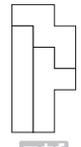
1 + 1 = 2



1 + 1 = 2



1 + 1 = 2



1 + 1 = 2

1

Lesson 2—Student Worksheet

Collecting Cookies

Look at the different batches of cookies below. Draw circles around the groups of cookies according to the addition problem listed, and then write the corresponding multiplication problem and solve. For the last three batches, draw the circles around groups according to the factor listed.

Student Worksheet Answers: Please note that even though the computation of 4×2 is equal to that of 2×4 , the meaning of each is different. (The first means 4 groups of 2, and the second means 2 groups of 4.) While it is certainly important for a child to eventually gain great computational agility, when first learning multiplication, it is most important to gain a solid conceptual understanding. Thus, in this case, it is best to correct these problems to match the answer key exactly rather than allowing the child to apply the commutative law before it has been introduced.

Lesson 3—Arrays

Daily Dose

Solve:

65	54	251	479
- 32	- 39	- 124	- 315
33	15	127	164

Skip Counting by 6s: Complete. Then recite five times.

6, 12, 18, 24, 30, 36, 42, 48, 54, 60

$4 \times 5 = 20$ $5 \times 5 = 25$

Lesson Answers:

- (a) 24 (b) 24 (c) 24 (d) $5 \times 7 = 35$
 (e) See pentomino images on the above right and the note below.

Pentomino Note: This question could also be viewed from the perspective that each pentomino piece is a group of five squares. The first figure shown then is 4×5 (just as it is when the area is calculated from the perspective of an array), but the second is 5×5 .

When children have a different perspective from the anticipated one but their perspective is mathematically accurate, it is especially important to cultivate the space for them to grow within their own perspective. Advanced mathematics is a tremendously creative field, and it is a gift to teach students early that exploration and creativity within the realm of that which is mathematically correct (and relevant) is a wonderful thing. Students who understand the correctness (or lack thereof) of multiple approaches become much better thinkers and doers and creators, not only in mathematics but also in all areas of their lives.

My Math Journal Answers: Page 32

ARRAYS

An array is ...
 a group of items or numbers
 arranged into rows and columns.

$3 \times 8 = 24$
 rows columns altogether

$3 \times 5 = 15$ $4 \times 6 = 24$

Lesson 3—Student Worksheet

Arrays in the Garden

Write the correct multiplication equations for the arrays shown in the garden beds below. Remember to write the rows in the first blank and the columns in the second blank.



$$2 \times 2 = 4$$



$$2 \times 4 = 8$$



$$4 \times 2 = 8$$



$$1 \times 9 = 9$$



$$3 \times 5 = 15$$



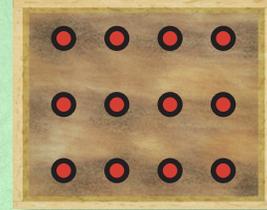
$$3 \times 7 = 21$$

Draw black circles to show seeds planted in an array for each of the following multiplication problems. Then write the products.

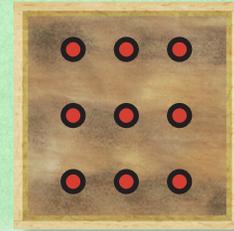
$$2 \times 3 = 6$$



$$3 \times 4 = 12$$



$$3 \times 3 = 9$$



Lesson 3—Bonus Activity

Secret Keys

Which key will unlock the padlock? One of the answers to the following addition or subtraction problems holds the correct key. Find the key that will open the lock by doing the following. First, solve the addition and subtraction problems. Second, read each clue to narrow down which answer is the right key. Third, write the number of the key on the blank line.

#1
$$\begin{array}{r} 871 \\ - 239 \\ \hline 632 \end{array}$$

#2
$$\begin{array}{r} 163 \\ + 516 \\ \hline 679 \end{array}$$

#3
$$\begin{array}{r} 592 \\ - 156 \\ \hline 436 \end{array}$$

#8
$$\begin{array}{r} 652 \\ + 329 \\ \hline 981 \end{array}$$

#4
$$\begin{array}{r} 464 \\ + 329 \\ \hline 793 \end{array}$$

#7
$$\begin{array}{r} 971 \\ - 462 \\ \hline 509 \end{array}$$

#5
$$\begin{array}{r} 893 \\ - 625 \\ \hline 268 \end{array}$$

#6
$$\begin{array}{r} 561 \\ + 432 \\ \hline 993 \end{array}$$

Which Key is it?

The number is an odd number.

The digit in the hundreds place is greater than the digit in the ones place.

All three digits in the number are odd.

The secret number is closer to the number 850 than the other number.

The secret key is # 4

Lesson 4—Multiplying by 0, 1, and 10

Daily Dose

Solve:

$\begin{array}{r} 4 \\ 450 \\ -129 \\ \hline 321 \end{array}$	$\begin{array}{r} 6 \\ 709 \\ -437 \\ \hline 272 \end{array}$	$\begin{array}{r} 211 \\ 320 \\ -135 \\ \hline 185 \end{array}$	$\begin{array}{r} 491 \\ 503 \\ -318 \\ \hline 185 \end{array}$
---	---	---	---

Skip Counting by 7s and 8s: Complete. Then recite five times.

7, 14, 21, 28, 35, 42, 49, 56, 63, 70

8, 16, 24, 32, 40, 48, 56, 64, 72, 80

Lesson Answers:

(a) $1 \times 1 = 1$ (b) $3 \times 1 = 3$ (c) $5 \times 10 = 50$ (d) $8 \times 10 = 80$ (e) $4 \times 0 = 0$

Bonus Activity Answers:

2	8	5	9	1	4	3	7	6
6	1	9	2	3	7	8	4	5
3	4	7	5	6	8	1	2	9
8	2	4	3	9	5	6	1	7
9	7	6	4	8	1	2	5	3
1	5	3	6	7	2	9	8	4
4	6	8	1	5	9	7	3	2
5	9	1	7	2	3	4	6	8
7	3	2	8	4	6	5	9	1

My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1									10		
2	2									20		
3	3									30		
4	4									40		
5	5									50		
6	6									60		
7	7									70		
8	8									80		
9	9									90		
10	10									100		
11	11									110		
12	12									120		

Lesson 4—Student Worksheet

Lesson 4—Student Worksheet

Marshy Multiplication

Solve the multiplication problems below.

$4 \times 1 = 4$	$1 \times 1 = 1$	$2 \times 0 = 0$
$8 \times 10 = 80$	$3 \times 0 = 0$	$8 \times 1 = 8$
$5 \times 1 = 5$	$2 \times 1 = 2$	$5 \times 10 = 50$
$9 \times 10 = 90$	$6 \times 0 = 0$	$6 \times 1 = 6$
$3 \times 10 = 30$	$3 \times 1 = 3$	$6 \times 10 = 60$
$8 \times 0 = 0$	$7 \times 10 = 70$	$10 \times 0 = 0$
$2 \times 10 = 20$	$5 \times 0 = 0$	$4 \times 10 = 40$
$7 \times 1 = 7$	$1 \times 0 = 0$	$9 \times 1 = 9$
$9 \times 0 = 0$	$10 \times 1 = 10$	$4 \times 0 = 0$
$1 \times 10 = 10$	$7 \times 0 = 0$	$10 \times 10 = 100$

Lesson 5—Math Journal and Review

Daily Dose

Fraction Review: Write the fraction shaded in the box.

$\frac{1}{6}$ $\frac{3}{4}$ $\frac{7}{10}$ $\frac{2}{5}$

Counting Money: Write the total amount in the box.

\$6.93

Solve:

$8 \times 1 = 8$ $12 \times 1 = 12$
 $6 \times 10 = 60$ $7 \times 0 = 0$
 $5 \times 0 = 0$ $9 \times 10 = 90$

Lesson Answers:

(a) A number is an amount of something. Digits are the numbers 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

My Math Journal Answers: Pages 8 and 12

NUMBER

Numbers
 328
 10,597
 an amount of something

Ordinal Numbers
 1st 2nd 3rd
 ↓ ↓ ↓
 order

Cardinal Numbers
 3
 amount counted

Digits
 3 2 8
 0, 1, 2, 3, 4,
 5, 6, 7, 8, 9

NUMBER

0 one two three four
 5 six seven eight nine
 10 eleven twelve thirteen fourteen
 15 sixteen seventeen eighteen nineteen

Bonus Activity Answers: Answers will vary.

Lesson 6—Multiplying by 2

Daily Dose

Time to the Minute: Write the time shown on the clocks.

12:34 **8:18** **2:11**

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$\square \times 1 = \square$ $\square \times 0 = \square$
 $\square \times 10 = \square$ $\square \times 1 = \square$
 $\square \times 1 = \square$ $\square \times 10 = \square$
 $\square = \square$ $\square \times 10 = \square$

Answers will vary.

Lesson Answers:

(a) 14 (b) 18 (c) $9 \times 2 = 18$ (d) 18 is the product, and 9 and 2 are factors.
 (e)

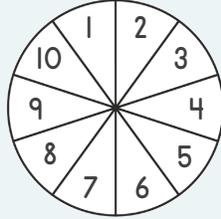
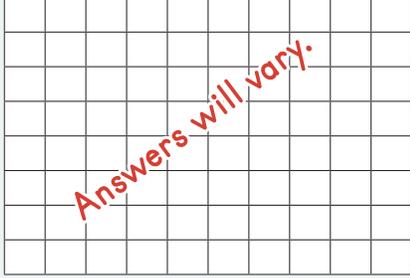
$5 \times 2 = 10$ $1 \times 2 = 2$
 $9 \times 2 = 18$ $4 \times 2 = 8$
 $6 \times 2 = 12$ $8 \times 2 = 16$
 $2 \times 2 = 4$ $3 \times 2 = 6$
 $7 \times 2 = 14$ $10 \times 2 = 20$

My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1		2										
2		4										
3		6										
4		8										
5		10										
6		12										
7		14										
8		16										
9		18										
10		20										
11		22										
12		24										

Lesson 6—Student Worksheet

Place a paper clip around the tip of a pencil and put the tip of the pencil on the center of the numbered circle. Flick the paper clip with your finger and multiply the number that the paper clip lands on by 2. Graph the problem by coloring in one of the boxes above the product (answer). Flick the paper clip 20 times and graph each product. Then see which product was found the most.

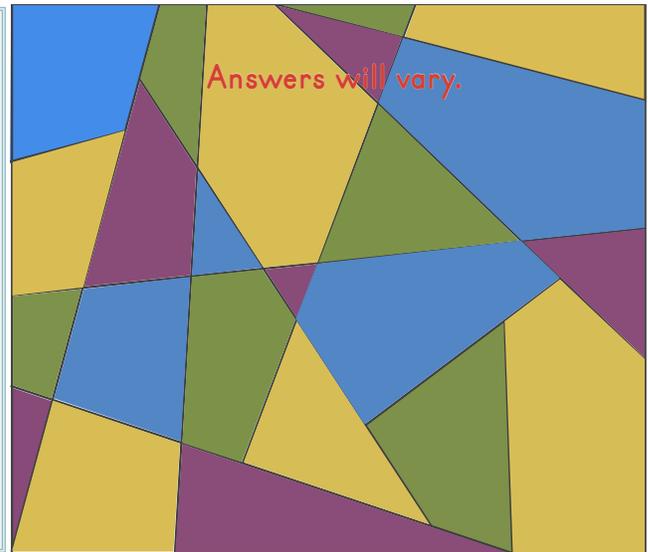


Spin & Graph

2 4 6 8 10 12 14 16 18 20

___ × 2 = ?

Bonus Activity Answers: Example Only



Lesson 7—Volume and Multiplication

Daily Dose

Add:

$\begin{array}{r} 59 \\ + 99 \\ \hline 158 \end{array}$	$\begin{array}{r} 817 \\ + 28 \\ \hline 845 \end{array}$	$\begin{array}{r} 532 \\ + 670 \\ \hline 1,202 \end{array}$	$\begin{array}{r} 973 \\ + 554 \\ \hline 1,527 \end{array}$
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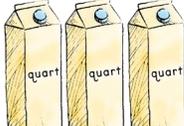
Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

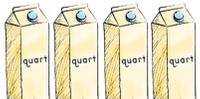
$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$	$\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$	$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$	$\begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array}$	$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array}$	$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}$	$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$	$\begin{array}{r} 8 \\ \times 2 \\ \hline 16 \end{array}$

Lesson Answers:

(a) 4 (b) 10 (c) $2 \times 2 = 4$ (d) $5 \times 2 = 10$

(e)  $\frac{1}{\text{# of quarts}} \times \frac{2}{\text{pints in a quart}} = \frac{2}{\text{total pints}}$
= 2 pints

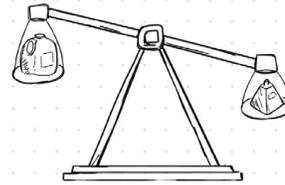
 $3 \times 2 = 6$
= 6 pints

$4 \times 2 = 8$
 = 8 pints

Bonus Activity Answers: Answers will vary.

My Math Journal Answers: Pages 45 and 48

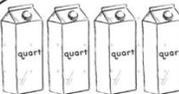
MEASURES



Volume: The amount of space an object or liquid takes up.

 = 
 = 1 pint

 = 
2 pints = 1 quart

 = 
4 quarts = 1 gallon

Lesson 7—Student Worksheet

Equal Amounts



8 cups = 4 pints = 2 quarts

Fill in the adjacent boxes with the equivalent amounts and pictures to represent those amounts. Then fill in the blanks below.

8 pints = 16 cups

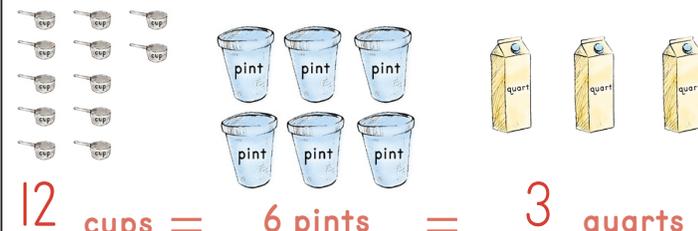
3 pints = 6 cups

10 pints = 20 cups

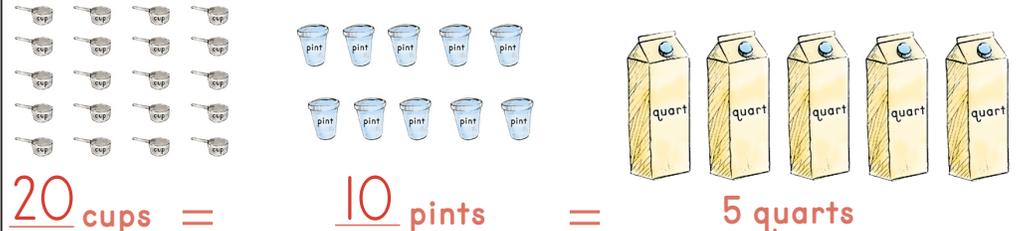
5 quarts = 10 pints

7 quarts = 14 pints

4 quarts = 8 pints



12 cups = 6 pints = 3 quarts

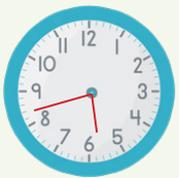


20 cups = 10 pints = 5 quarts

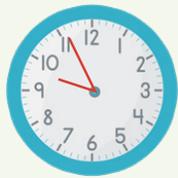
Lesson 8—Multiplying by 3

Daily Dose

Time to the Minute: Draw the time on the clocks.



5:42



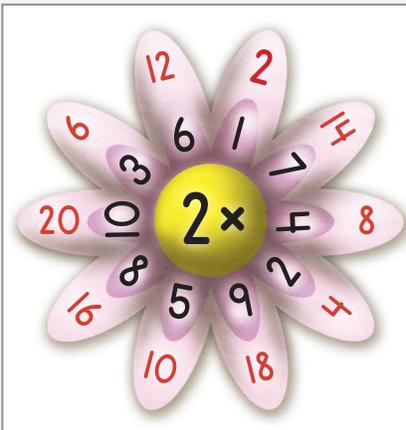
9:56



11:39

Flower Power:

Multiply the number shown in the center of the flower by each number shown on the small petals. Write the product for each multiplication problem on the larger petals. One petal is already done for you.



Lesson Answers:

- (a) 9 (b) 21 (c) 21
 (d) $7 \times 3 = 21$
 (e) $5 \times 3 = 15$; $2 \times 3 = 6$; $9 \times 3 = 27$
 (f) 12
 (g)

 $6 \times 3 = 18$	 $1 \times 3 = 3$
 $10 \times 3 = 30$	 $8 \times 3 = 24$

My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1			3									
2			6									
3			9									
4			12									
5			15									
6			18									
7			21									
8			24									
9			27									
10			30									
11			33									
12			36									

Lesson 9—Commutative Property

Daily Dose

Volume Review: Write the equivalent amount in the box provided.

3 gal. = qt.

2 qt. = pt.

3 pt. = cups



Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

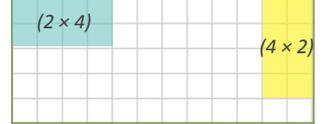
5	8	9	3	2	6	4	7
$\times 3$							
<hr/>							
15	24	27	9	6	18	12	21



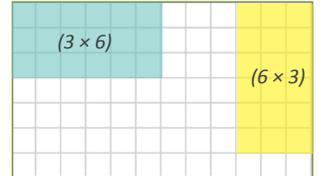
Lesson Answers:

(a) $3 \times 5 = 15$ (b) 4 (c) 3 (d) 12 (e) 3 (f) 4
(g) 12 (h) 16 (i) 16

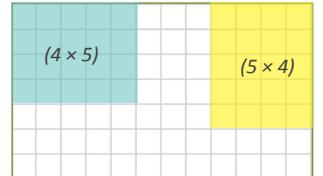
(j) $2 \times 4 = 8$ $4 \times 2 = 8$



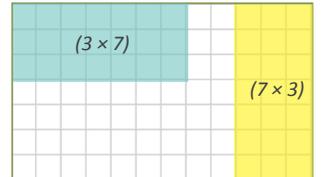
$3 \times 6 = 18$ $6 \times 3 = 18$



$4 \times 5 = 20$ $5 \times 4 = 20$



$3 \times 7 = 21$ $7 \times 3 = 21$



Lesson 9—Student Worksheet

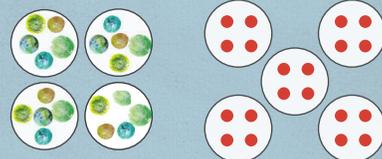


Fill in the blanks.

$6 \times 7 = 7 \times 6$ $7 \times 3 = 3 \times 7$

$9 \times 4 = 4 \times 9$ $5 \times 2 = 2 \times 5$

Draw marbles in the empty circles to represent the multiplication problem. Then count the marbles to solve.



$4 \times 5 = 5 \times 4$

= 20 marbles

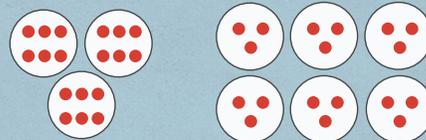
Use the groups of crayons to write the multiplication problem represented. Then skip count to solve.



$2 \times 8 = 8 \times 2$

= 16 crayons

Draw dots in the empty circles to represent the multiplication problem. Then count the dots to solve.



$3 \times 6 = 6 \times 3$

= 18 dots

Lesson 9—Bonus Activity

Adding and Subtracting with Regrouping

Solve each problem below. Place the corresponding letter with each matching answer below the riddle.

$\begin{array}{r} \text{t} \\ 430 \\ -135 \\ \hline 295 \end{array}$	$\begin{array}{r} \text{g} \\ 951 \\ +435 \\ \hline 1,386 \end{array}$	$\begin{array}{r} \text{d} \\ 594 \\ -585 \\ \hline 9 \end{array}$	$\begin{array}{r} \text{i} \\ 495 \\ +263 \\ \hline 758 \end{array}$	$\begin{array}{r} \text{e} \\ 217 \\ +748 \\ \hline 965 \end{array}$	$\begin{array}{r} \text{o} \\ 152 \\ +585 \\ \hline 737 \end{array}$	$\begin{array}{r} \text{r} \\ 848 \\ -498 \\ \hline 350 \end{array}$	$\begin{array}{r} \text{s} \\ 710 \\ +531 \\ \hline 1,241 \end{array}$	$\begin{array}{r} \text{h} \\ 665 \\ -284 \\ \hline 381 \end{array}$	$\begin{array}{r} \text{l} \\ 815 \\ -764 \\ \hline 151 \end{array}$
--	--	--	--	--	--	--	--	--	--

Why did the chicken cross the playground?

$\begin{array}{r} \text{t} \\ 295 \end{array}$
 $\begin{array}{r} \text{o} \\ 737 \end{array}$
 $\begin{array}{r} \text{g} \\ 1,386 \end{array}$
 $\begin{array}{r} \text{e} \\ 965 \end{array}$
 $\begin{array}{r} \text{t} \\ 295 \end{array}$
 $\begin{array}{r} \text{t} \\ 295 \end{array}$
 $\begin{array}{r} \text{o} \\ 737 \end{array}$
 $\begin{array}{r} \text{t} \\ 295 \end{array}$
 $\begin{array}{r} \text{h} \\ 381 \end{array}$
 $\begin{array}{r} \text{e} \\ 965 \end{array}$

$\begin{array}{r} \text{o} \\ 737 \end{array}$
 $\begin{array}{r} \text{t} \\ 295 \end{array}$
 $\begin{array}{r} \text{h} \\ 381 \end{array}$
 $\begin{array}{r} \text{e} \\ 965 \end{array}$
 $\begin{array}{r} \text{r} \\ 350 \end{array}$
 $\begin{array}{r} \text{s} \\ 1,241 \end{array}$
 $\begin{array}{r} \text{l} \\ 151 \end{array}$
 $\begin{array}{r} \text{i} \\ 758 \end{array}$
 $\begin{array}{r} \text{d} \\ 9 \end{array}$
 $\begin{array}{r} \text{e} \\ 965 \end{array}$

Lesson 10—Rounding Review

Daily Dose

Fraction Review: Color in each shape to match the fraction.

$\frac{5}{8}$

$\frac{1}{3}$

$\frac{4}{6}$

Money: Write the total amount in the box provided.

\$15.84

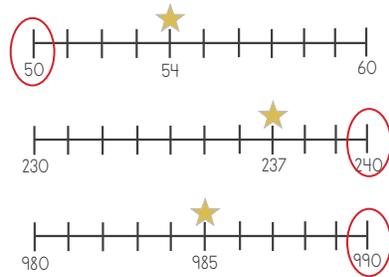
Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$3 \times \square =$	$3 \times \square =$
$3 \times \square =$	$3 \times \square =$
$3 \times \square =$	$3 \times \square =$
$3 \times \square =$	$3 \times \square =$

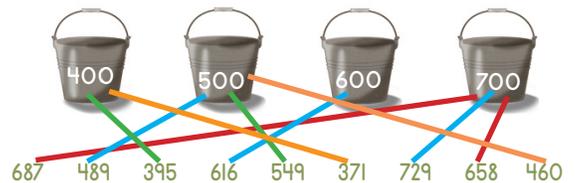
Answers will vary.

Lesson Answers:

(a)



(b)



(c) $38 = 40$; $51 = 50$; $244 = 240$;
 $316 = 320$; $797 = 800$ (d) $686 = 700$;
 $113 = 100$; $450 = 500$; $334 = 300$;
 $967 = 1,000$

Lesson 10—Student Worksheet

Filling the Feed Buckets

Round each number to the nearest ten and draw a line to the correct pail.

67 23 11 79 45 27 95 39 62 94 88

Round each number to the nearest hundred and draw a line to the correct barrel.

438 367 450 249 294 961 709 878 825 748

Multiply.

$3 \times 0 = 0$ $5 \times 1 = 5$ $8 \times 2 = 16$ $5 \times 3 = 15$ $7 \times 10 = 70$
 $9 \times 0 = 0$ $8 \times 1 = 8$ $3 \times 2 = 6$ $4 \times 3 = 12$ $5 \times 10 = 50$

Lesson 11—Polygons and Quadrilaterals

My Math Journal Answers: Pages 64 and 65

Daily Dose

Round to the Nearest Tens Place:

34 51 68 75 27 42 86 93

30 50 70 80 30 40 90 90

Flower Power:

Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.

2D SHAPES

Definition: Two-Dimensional (2D) shapes are shapes that are flat. They have only length and width.

Examples of polygons:

NAME: hexagon
SIDES: 6
VERTICES: 6
ANGLES: 6

NAME: pentagon
SIDES: 5
VERTICES: 5
ANGLES: 5

NAME: octagon
SIDES: 8
VERTICES: 8
ANGLES: 8

Examples of quadrilaterals:

NAME: trapezoid
SIDES: 4
VERTICES: 4
ANGLES: 4

NAME: parallelogram
SIDES: 4
VERTICES: 4
ANGLES: 4

NAME: rhombus
SIDES: 4
VERTICES: 4
ANGLES: 4

Definition: A quadrilateral is a polygon with exactly 4 sides.

Answers will vary.

Lesson Answers:

(a) square, hexagon, octagon, triangle, pentagon, rectangle (b)

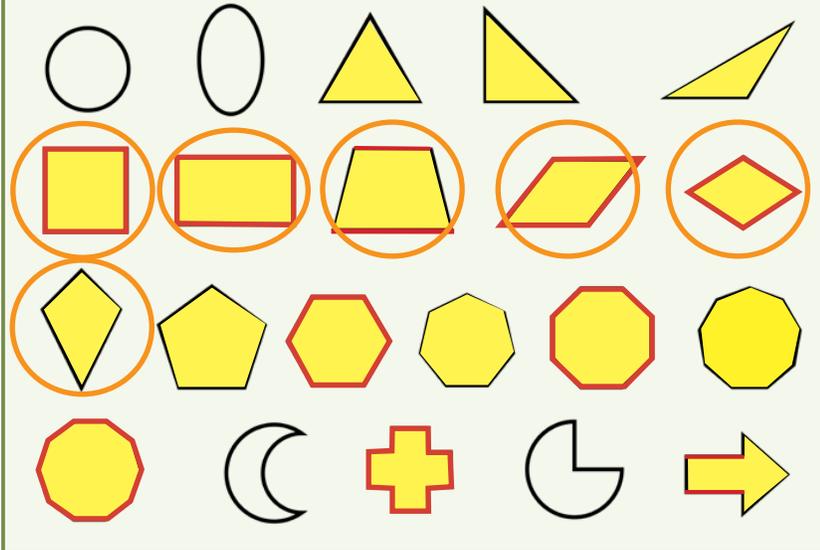
(c) (d) (e)

(f) 7 sides, 7 angles, 7 vertices (g) The sides of the orange shape are all the same length. The sides of the blue shape are not all the same length. (h)

Independent Activities

Student Worksheet: Shape Practice

How? Have the child color the polygons yellow, circle the quadrilaterals with orange, and trace the sets of parallel sides with red.



Lesson 12—Multiplication and Measurement

Daily Dose

Solve:

$\begin{array}{r} 11 \\ 762 \\ +289 \\ \hline 1,051 \end{array}$	$\begin{array}{r} 816 \\ 972 \\ -478 \\ \hline 494 \end{array}$	$\begin{array}{r} 1 \\ 801 \\ +179 \\ \hline 980 \end{array}$	$\begin{array}{r} 5 \\ 609 \\ -437 \\ \hline 172 \end{array}$
--	---	---	---

Multiplication Bingo (Multiplying by 3):

Roll the ten-sided dice and place the dice in the empty square below. Then solve the fact and color in the product. Continue until you have four colored boxes in a row (across or down).

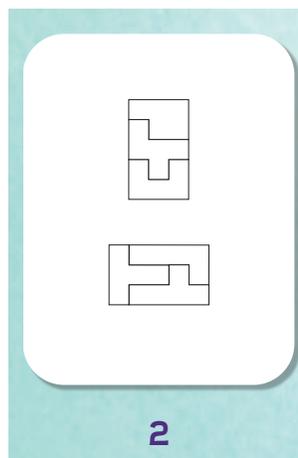
$3 \times \square = \square$

9	30	27	15
6	5	18	9
12	21	6	18
24	3	15	12

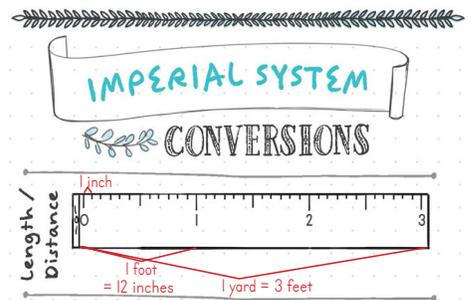
Answers will vary.

Bonus Activity Answers:

(Two examples are shown here, but there are more combinations possible.)



My Math Journal Answers: Page 48



Lesson Answers:

(a) 12 (b) 3 (c) 15 (d) 30 (e) 18 (f) 24 (g) $7 \times 3 = 21$ feet (h) $4 \times 3 = 12$ feet (i) $9 \times 3 = 27$ feet

(j) 7 yards (k) 7 (l) 18 feet = yards 30 feet = yards

15 feet = yards 27 feet = yards

Lesson 12—Student Worksheet

Race to the End Zone

See how many yards each team carries the football by taking turns rolling a twelve-sided dice for the Falcons and then for the Wolves. Convert the yards into feet by multiplying by 3. Add the total number of yards for each team to see which team wins!



The Falcons



The Wolves

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$+ \square \times 3 \text{ ft} = \square \text{ ft}$$

\square total yards

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$\square \times 3 \text{ ft} = \square \text{ ft}$$

$$+ \square \times 3 \text{ ft} = \square \text{ ft}$$

\square total yards

Answers will vary.

The winner is _____ !

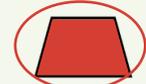


Lesson 13—Logical Thinking

Daily Dose

Shape Mix-up: Circle the shapes that are quadrilaterals and color the shapes that are polygons.









Measurement Review:

12

 in = 1 ft

3

 ft = 1 yd

Solve:

$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$	$\begin{array}{r} 3 \\ \times 10 \\ \hline 30 \end{array}$	$\begin{array}{r} 3 \\ \times 6 \\ \hline 18 \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline 27 \end{array}$	$\begin{array}{r} 3 \\ \times 7 \\ \hline 21 \end{array}$	$\begin{array}{r} 3 \\ \times 8 \\ \hline 24 \end{array}$
---	--	---	---	---	---

Down on Mr. Gallon's Farm

Mr. Gallon is as busy as ever down on his farm. Do you remember the story of Mr. Gallon and his four quail? If so, tell the story in your own words. (If you don't remember all the details, you can read the story below the picture.) Then use the clues from Mr. Gallon's story to solve the problems on the right side of the page. **Strategy Hint:** Color each gallon a different color to track how each gallon is split up.

Meet Mr. Gallon, the farmer! On his farm Mr. Gallon has 4 birds called quail. One day, Mr. Gallon was organizing the food for his 4 quail. He placed 2 pails in front of each quail. Then he poured 2 cups of corn into each of the pails.



This fun little story about Mr. Gallon helps us remember equal measurements. Mr. Gallon represents 1 gallon of something. He has 4 quail. The quail stand for quarts. One gallon equals 4 quarts. Each quail gets 2 pails. The pails stand for pints. One quart is equal to 2 pints. Each pail has 2 cups of corn in it. One pint equals 2 cups.

Mr. Gallon's cows have been giving him lots of milk. He decides to share 3 gallons with 4 of his neighbors.

Neighbor #1
Mr. Gallon gives 3 quarts and 1 pint to his first neighbor.

Neighbor #2
Mr. Gallon gives 1 gallon and 2 cups to his second neighbor.

Neighbor #3
Mr. Gallon gives 4 pints and 1 cup to his third neighbor.

Neighbor #4
Mr. Gallon gives all the remaining milk to his fourth neighbor. How much milk did he give that neighbor?







Lesson Answers:

(a) Which two cars the families should take so that they all fit in those cars (b) $6 + 4 + 5 = 15$ people (c) The gray and blue cars have 13 seats; the blue and red cars have 14 seats; the gray and red cars have 15 seats. (d) Answers will vary. (e) Answers will vary. (f) The red and gray cars have 15 seats, and there are 15 people altogether.

Lesson 13—Student Worksheet

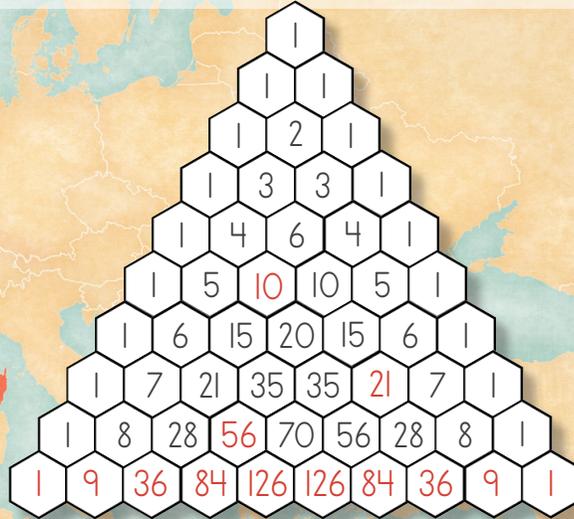
Pascal's Triangle



Blaise Pascal, 1623–1662

Blaise Pascal was a French mathematician and scientist who lived long ago during the 1600s. Pascal made many great contributions to the world in both math and science. One of his discoveries included a triangular mathematical pattern that eventually became known as Pascal's Triangle.

Shown below is part of Pascal's Triangle. (The triangle can continue on forever.) Spend a few minutes finding as many patterns in Pascal's Triangle as you can. Then see if you can find the pattern that will help you figure out the missing numbers. If you are able to figure out the pattern, fill in the empty hexagons with the missing numbers. If you aren't sure how to fill in the empty hexagons, turn this page upside down and read the message written at the bottom of this page.



Pascal's Triangle is created by adding the two numbers shown in the above two hexagons. The pattern continues by adding each two side-by-side numbers and writing the sum (the total) in the hexagon directly below in the middle of the two added hexagons.

Lesson 14—Number Line Jumping

Daily Dose

Time to the Minute: Write the time shown on each clock.



4:52



8:47



2:18

Solve:

$$\begin{array}{r} \$5.38 \\ + \$3.97 \\ \hline \$9.35 \end{array}$$

$$\begin{array}{r} \$7.55 \\ + \$4.72 \\ \hline \$12.27 \end{array}$$

Missing Factor: Fill in the missing factors.

3	3	3	3	3	3
× 7	× 5	× 9	× 3	× 8	× 4
21	15	27	9	24	12

Bonus Activity Answers:

Answers for back of pieces:

$2 \times 6 = 12$	$2 \times 4 = 8$
$1 \times 6 = 6$	$5 \times 3 = 15$
$2 \times 5 = 10$	$2 \times 3 = 6$
$3 \times 4 = 12$	$3 \times 3 = 9$
$3 \times 7 = 21$	$1 \times 7 = 7$
$1 \times 7 = 7$	$1 \times 0 = 0$

Completed picture:



Lesson Answers:

(a) 2 tens (b) 7 ones (c) 59 (d) $63 + 24 = 87$; $57 + 31 = 88$ (e) $38 + 39 = 77$ (f) $25 + 44 = 69$; $39 + 53 = 92$; $57 + 24 = 81$

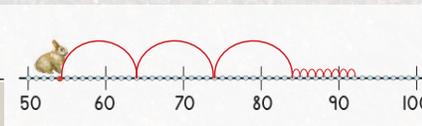
Lesson 14—Student Worksheet

Adding with the Appalachian Cottontail

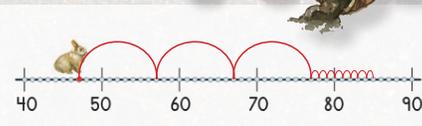
Solve each addition problem using the number lines below.



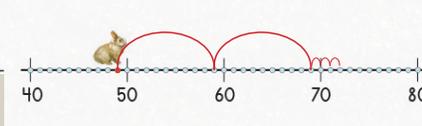
$54 + 38 = 92$



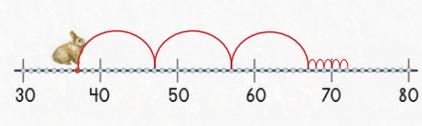
$47 + 38 = 85$



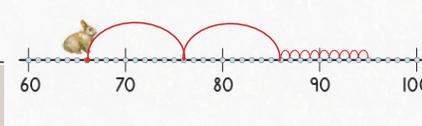
$49 + 23 = 72$



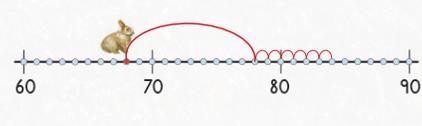
$37 + 35 = 72$



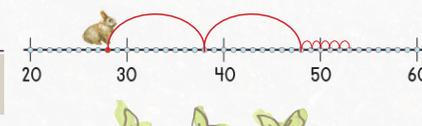
$66 + 29 = 95$



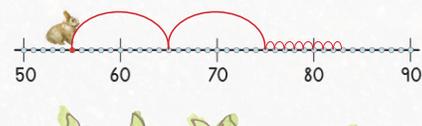
$68 + 16 = 84$



$28 + 25 = 53$



$55 + 28 = 83$



Lesson 15—Multiplying by 4

Daily Dose

Mental Math: Use the Number Line Jumping mental math strategy to solve the problems. If needed, the number line from the previous lesson may be used.

$37 + 62 = 99$

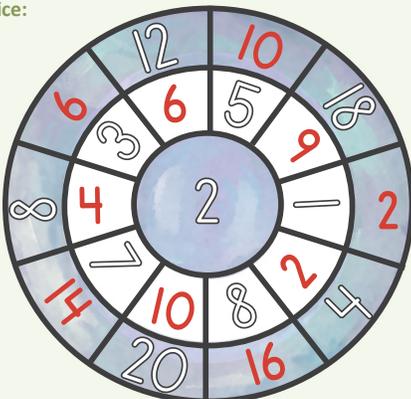
$48 + 31 = 79$

$54 + 26 = 80$

$57 + 29 = 86$

Target Practice:

Each outer circle is obtained by multiplying the number in the inner circle with the number in the adjacent part of the white circle. Fill in the blank spaces with the correct answers.



My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1				4								
2				8								
3				12								
4				16								
5				20								
6				24								
7				28								
8				32								
9				36								
10				40								
11				44								
12				48								

Bonus Activity Answers:

Square Answers:

1 2 3	10	11
4 5 6		
7 8 9		
12	13	14

Challenge—Rectangle Answers:

1	4 5 6	7 8 9	10 11 12	13
2				14
3				15
16	17	18	19	20
				21
				22

Lesson Answers:

- (a) 4 (b) 8 (c) 16 (d) 28 (e) 4 (f) 1 (g) 20
 (h) $6 \times 4 = 24$ sides (i) $3 \times 4 = 12$ sides

Lesson 15—Student Worksheet

Solve the multiplication facts on the list. Then find the facts in the puzzle. Write an "x" and "=" in the correct places. The facts are hidden both horizontally and vertically and may overlap with other equations.

Multiplication Facts

$1 \times 4 = 4$
 $2 \times 4 = 8$
 $3 \times 4 = 12$
 $4 \times 4 = 16$
 $5 \times 4 = 20$
 $6 \times 4 = 24$
 $7 \times 4 = 28$
 $8 \times 4 = 32$
 $9 \times 4 = 36$
 $10 \times 4 = 40$
 $11 \times 4 = 44$
 $12 \times 4 = 48$

Lesson 16—Metric System Practice

Daily Dose

Round to the Nearest Tens Place:

561 873 439 248 707 922

560 870 440 250 710 920

Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

4×3	4×8	4×5	4×6	4×9	4×4	4×7	4×2
12	32	20	24	36	16	28	8

28 12 36 24 16 32 8 20

Lesson Answers:

- (a)
 3 cm 6 cm 5 cm
 30 mm 60 mm 50 mm
- (b) the mm are the cm times ten
- (c) 10
- (d) $8 \times 10 = 80$ $3 \times 10 = 30$
 $6 \times 10 = 60$ $9 \times 10 = 90$
- (e) $8 \text{ cm} \times 10 = 80 \text{ mm}$ $3 \text{ cm} \times 10 = 30 \text{ mm}$
 $6 \text{ cm} \times 10 = 60 \text{ mm}$ $9 \text{ cm} \times 10 = 90 \text{ mm}$
- (f) 70 mm (g) 7 (h) 50 mm (i) 5 (j) 5 cm (k) 10 mm (l) 100 cm

My Math Journal Answers: Page 49

METRIC SYSTEM CONVERSIONS

10 mm = 1 cm 100 cm = 1 meter

Lesson 16—Student Worksheet

Metric Measurements

Look at the measurement of each item below. Fill in each blank to complete the metric conversions.

Centimeters to Millimeters

Chalkboard
5 cm = 50 mm

Pen
8 cm = 80 mm

Paper Clip
2 cm = 20 mm

Scissors
9 cm = 90 mm

4 cm = 40 mm 7 cm = 70 mm

Millimeters to Centimeters

Calculator
60 mm = 6 cm

Push pin
10 mm = 1 cm

Sticky notes
30 mm = 3 cm

Pencil holder
70 mm = 7 cm

6 cm = 60 mm 3 cm = 30 mm

Lesson 17—More Metric System Practice

Daily Dose

Solve:

$\begin{array}{r} 44 \\ -29 \\ \hline 15 \end{array}$	$\begin{array}{r} 63 \\ -48 \\ \hline 15 \end{array}$	$\begin{array}{r} 391 \\ -64 \\ \hline 327 \end{array}$	$\begin{array}{r} 4900 \\ -157 \\ \hline 343 \end{array}$
---	---	---	---

Flower Power:

Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.

Lesson Answers:

(a) 20 cm (b) 10 mm (c) 100 cm (d) 100 cm (e–g) see chart on the right

Species of Owls		Wingspan ¹
	Barn Owl ★	up to 125 cm 1 m 25 cm
	Great Horned Owl ★	up to 145 cm 1 m 45 cm
	Long-Eared Owl ★	up to 100 cm 1 m
	Short-Eared Owl ★	up to 103 cm 1 m 3 cm
	Eastern Screech-Owl	up to 61 cm 61 cm
	Saw-Whet Owl	up to 48 cm 48 cm
	Barred Owl ★	up to 110 cm 1 m 10 cm
	Snowy Owl ★	up to 145 cm 1 m 45 cm

Lesson 17—Student Worksheet



Convert the measurements at the bottom of the page to centimeters. Then find the answer in the number grid and circle it. Answers can be found across, down, or diagonally. The first one is done for you.

*The number 172 can be found in two locations.

2	6	7	9	1	8	0	1	3	1	4	6	8	1	1
3	1	4	9	1	0	3	5	4	7	2	9	0	2	5
1	5	8	5	8	5	9	1	7	2	0	1	7	3	7
4	1	6	7	3	2	8	3	3	8	1	4	3	7	1
7	4	9	0	7	2	3	9	4	7	0	0	5	6	6
5	8	0	1	1	7	5	0	1	3	1	0	6	2	1
1	2	5	3	9	3	1	7	8	4	9	8	1	3	4

1 m 25 cm = 125 cm

1 m 87 cm = 187 cm

1 m 39 cm = 139 cm

1 m 72 cm = 172 cm

1 m 17 cm = 117 cm

1 m 47 cm = 147 cm

1 m 6 cm = 106 cm

1 m 23 cm = 123 cm

1 m 36 cm = 136 cm

1 m 78 cm = 178 cm

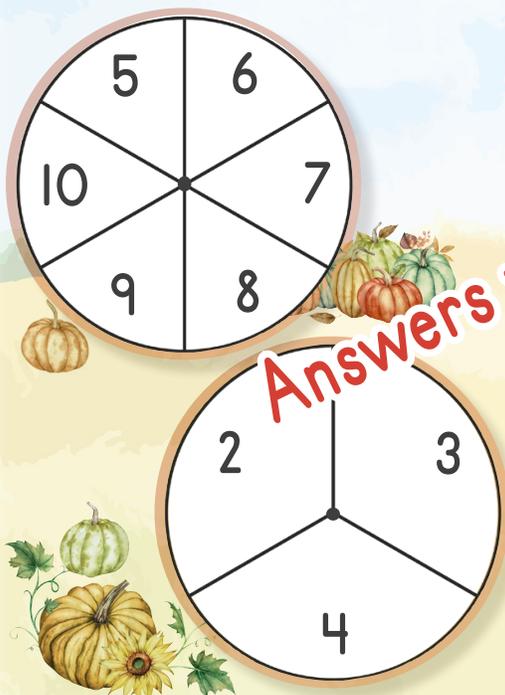
1 m 80 cm = 180 cm

1 m 58 cm = 158 cm

Lesson 17—Bonus Activity

Pumpkin Patch Spin and Shade

With two paper clips and a pencil, create two spinners for the circles below. Use the pencil to spin on one circle and then the other. Solve the multiplication problem created from the numbers shown on the spinners. Color each product you spin. Continue spinning until four numbers in a row are colored in.



10	27	15	12	36	20
24	32	20	40	28	16
18	36	20	21	18	
32	24	21	14	16	30
30	12	28	40	18	24
15	18	20	27	24	10

Answers will vary.



Lesson 18—Give to the Other

Daily Dose

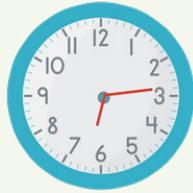
Time to the Minute: Draw the hands on the clocks.



2:27



1:58



6:14

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$4 \times \square =$ $4 \times \square =$
 $4 \times \square =$ $4 \times \square =$
 $4 \times \square =$ $4 \times \square =$
 $4 \times \square =$ $4 \times \square =$

Answers will vary.

Lesson Answers:

(a) 81 (b) 94¢

(c)
$$\begin{array}{r} 16 \rightarrow 15 \\ + 29 \rightarrow + 30 \\ \hline 45 \end{array}$$

(d)
$$\begin{array}{r} 54 \rightarrow 52 \\ + 48 \rightarrow + 50 \\ \hline 102 \end{array}$$

(e)
$$\begin{array}{r} 17 \rightarrow 20 \\ + 25 \rightarrow + 22 \\ \hline 42 \end{array}$$

$$\begin{array}{r} 72 \rightarrow 71 \\ + 19 \rightarrow + 20 \\ \hline 91 \end{array}$$

$$\begin{array}{r} 49 \rightarrow 50 \\ + 34 \rightarrow + 33 \\ \hline 83 \end{array}$$

Lesson 18—Student Worksheet

Practice solving the addition problems using mental math. The orange spaces to the side are for you to write how you “give to the other.” Write your answers in the boxes below each problem.

$$\begin{array}{r} 32 \rightarrow 31 \\ + 39 \rightarrow + 40 \\ \hline 71 \end{array}$$

$$\begin{array}{r} 64 \rightarrow 62 \\ + 28 \rightarrow + 30 \\ \hline 92 \end{array}$$

$$\begin{array}{r} 48 \rightarrow 50 \\ + 25 \rightarrow + 23 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 41 \rightarrow 40 \\ + 59 \rightarrow + 60 \\ \hline 100 \end{array}$$

$$\begin{array}{r} 18 \rightarrow 20 \\ + 57 \rightarrow + 55 \\ \hline 75 \end{array}$$



$$\begin{array}{r} 52 \rightarrow 51 \\ + 49 \rightarrow + 50 \\ \hline 101 \end{array}$$

$$\begin{array}{r} 32 \rightarrow 30 \\ + 78 \rightarrow + 80 \\ \hline 110 \end{array}$$

$$\begin{array}{r} 47 \rightarrow 50 \\ + 44 \rightarrow + 41 \\ \hline 91 \end{array}$$

$$\begin{array}{r} 25 \rightarrow 24 \\ + 89 \rightarrow + 90 \\ \hline 114 \end{array}$$

Magnificent
Mental Math



Lesson 20—Student Worksheet

Crack the Code

The Liberty Bell

Solve the multiplication problems. Then put a letter on each line below, according to the matching answers.

$1 \times 8 =$	$1 \times 11 =$	$0 \times 7 =$	$1 \times 5 =$	$1 \times 6 =$	$3 \times 4 =$
E	E	N	E	P	S
8	11	0	5	6	12
$10 \times 4 =$	$2 \times 9 =$	$2 \times 8 =$	$2 \times 7 =$	$2 \times 5 =$	$2 \times 10 =$
S	S	L	L	V	A
40	18	16	14	10	20
$3 \times 5 =$	$3 \times 7 =$	$3 \times 8 =$	$3 \times 9 =$	$3 \times 10 =$	$3 \times 3 =$
A	A	I	Y	T	T
15	21	24	27	30	9
$10 \times 7 =$	$10 \times 9 =$	$10 \times 8 =$	$10 \times 6 =$	$10 \times 10 =$	$1 \times 7 =$
H	O	U	B	L	E
70	90	80	60	100	7



The Liberty Bell is an iconic symbol in US history. It can be found in Philadelphia, Pennsylvania, across from Independence Hall, where it originally hung in the clock tower. Before becoming famously known as the Liberty Bell during the Civil Rights movement, it had another name. During colonial times when it was first created, the bell was called the . . .

P	e	n	n	s	y	l	v	a	n	i	a		
6	7	0	0	12	27	16	10	20	0	24	15		
S	t	a	t	e	H	o	u	s	e	B	e	l	l
40	30	21	9	8	70	90	80	18	11	60	5	14	100

Lesson 21—Mental Math: Tens and Ones

Student Worksheet Answers:

Daily Dose

Mr. Gallon Story Review: Write the equivalent amount for each measurement. Refer to the “Mr. Gallon” illustration (used in previous lessons), if needed.

5 quarts = 10 pints

4 pints = 8 cups

2 gallons = 8 quarts

8 pints = 16 cups

Missing Factor: Fill in the missing factors.

$\frac{4}{\times}$	$\frac{4}{\times}$	$\frac{4}{\times}$	$\frac{4}{\times}$	$\frac{4}{\times}$	$\frac{4}{\times}$
8	2	5	4	7	6
32	8	20	16	28	24

Mountain Mental Math

It's time to take a hike through this fun mountain adventure. Starting with the problem at the bottom right-hand corner, work your way along the mountain path by solving each problem as you come to it. Solve each one using the mental math skills you have learned.



Finish 87
+24

36
+67

54
+47

42
+59

67
+34

58
+35

63
+39

Start

Lesson Answers:

(a) (b) (c)

(d) An arrow is added for each additional 10. (e) base-60 system

$54 = \underline{50} + \underline{4}$ $26 = \underline{20} + \underline{6}$

(f) $78 = \underline{70} + \underline{8}$ $63 = \underline{60} + \underline{3}$ (g) 88 (h) 71 (i) see image in blue box

	$35 = 30 + 5$
	$+ 65 = 60 + 5$
	$\hline 100 \quad 90 + 10$
	$29 = 20 + 9$
	$+ 47 = 40 + 7$
	$\hline 76 \quad 60 + 16$
	$54 = 50 + 4$
	$+ 27 = 20 + 7$
	$\hline 81 \quad 70 + 11$

Lesson 22—Multiplying by 5

Daily Dose

Mental Math: Use the Tens and Ones mental math strategy to add.

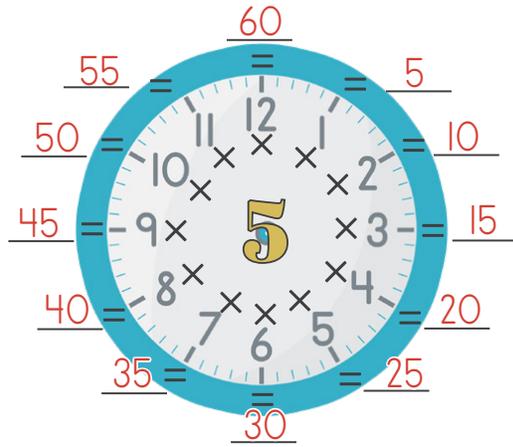
$$\begin{array}{r} 24 = 20 + 4 \\ + 35 = 30 + 5 \\ \hline 59 = 50 + 9 \end{array} \quad \begin{array}{r} 17 = 10 + 7 \\ + 48 = 40 + 8 \\ \hline 65 = 50 + 15 \end{array} \quad \begin{array}{r} 54 = 50 + 4 \\ + 27 = 20 + 7 \\ \hline 81 = 70 + 11 \end{array}$$

Multiplication Mix Up: Complete the multiplication chart by filling in the product for each multiplication fact.

×	3	10	4	2
4	12	40	16	8
0	0	0	0	0
1	3	10	4	2
3	9	30	12	6

Lesson Answers:

(a) see clock image (b) the five in the center and each of the clock numbers (c) each answer, or the minutes



My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1					5							
2					10							
3					15							
4					20							
5					25							
6					30							
7					35							
8					40							
9					45							
10					50							
11					55							
12					60							

Lesson 22—Student Worksheet



Minute Hand Multiplication



On each clock below, circle the number the minute hand points to. Write that number at the beginning of the problem, and then write the answer. Lastly, write the time shown on the clock. The first one is done for you.



$5 \times 5 = 25$
 $11:25$



$1 \times 5 = 5$
 $3:05$



$8 \times 5 = 40$
 $9:40$



$7 \times 5 = 35$
 $1:35$



$3 \times 5 = 15$
 $12:15$



$10 \times 5 = 50$
 $2:50$



$4 \times 5 = 20$
 $6:20$



$6 \times 5 = 30$
 $7:30$



$2 \times 5 = 10$
 $5:10$



$9 \times 5 = 45$
 $10:45$



Lesson 22—Bonus Activity

Moving In

Convert each of the measurements below to centimeters. Then use a metric ruler to draw each of the items (using centimeters) in the house wherever you would like to place them. The first one has been done for you. *Note:* You may want to draw the items on a separate sheet of paper, cut them out, and lay all the items in place before gluing them.

Item	Wide	Long
Bed	20 mm = 2 cm	30 mm = 3 cm
Bathroom Sink	10 mm = 1 cm	10 mm = 1 cm
Bathtub	10 mm = 1 cm	20 mm = 2 cm
Toilet	10 mm = 1 cm	10 mm = 1 cm
Dining Table	20 mm = 2 cm	40 mm = 4 cm
Refrigerator	10 mm = 1 cm	10 mm = 1 cm
Piano	10 mm = 1 cm	20 mm = 2 cm
TV Stand	10 mm = 1 cm	20 mm = 2 cm
Bookcase	10 mm = 1 cm	30 mm = 3 cm
Dresser	10 mm = 1 cm	20 mm = 2 cm

Lesson 23—Addition Mental Math Favorites

Daily Dose

Round to the Nearest Tens Place:
 125 872 351 639 560 413
 130 870 350 640 560 410

Fraction Review: Divide and color the squares to match the fractions listed below.

$\frac{1}{2}$

$\frac{3}{4}$

$\frac{2}{3}$

$\frac{1}{6}$

Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

$5 \times 3 = 15$

$5 \times 8 = 40$

$5 \times 5 = 25$

$5 \times 6 = 30$

$5 \times 9 = 45$

$5 \times 4 = 20$

$5 \times 7 = 35$

$5 \times 2 = 10$

35

30

15

20

10

25

40

45

My Math Journal Answers: Pages 24 and 26

ADDITION STRATEGIES

Near Doubles

$$\begin{array}{r} 8 \\ + 7 \\ \hline 15 \end{array}$$
 $8 < \frac{1}{2} 7$

Adding Nine

$$\begin{array}{r} 6 \\ + 9 \\ \hline 16 \\ - 1 \\ \hline 15 \end{array}$$

Making 10 and Then

$$\begin{array}{r} 6 \\ + 8 \\ \hline 14 \end{array}$$
 $6 < \frac{4}{8} > \frac{4}{10}$

You know $7 + 7 = 14$. Add 1 more and it makes 15.

Anytime you need to add 9 to a number, add 10 instead. Then take away 1 to get the answer.

Split the 6 into $4 + 2$ so that you can give 2 to the 8. $8 + 2 = 10$, plus 4 more is 14.

MULTI-DIGIT ADDITION STRATEGIES

Number Line Jumping

$$\begin{array}{r} 17 \\ + 36 \\ \hline 53 \end{array}$$

53 Picture a number line in your head. First jump the number of tens being added, and then jump the number of ones being added.

Give to the other

$$\begin{array}{r} 55 \\ + 38 \\ \hline 93 \end{array}$$
 $55 \xrightarrow{2} 53 \xrightarrow{+40} 93$

You can take 2 from the 55 and give it to the 38 to make 40. Then add the remaining 53 to get to 93.

Tens and Ones

$$\begin{array}{r} 27 \\ + 74 \\ \hline 101 \end{array}$$
 $27 + 70 = 97$
 $97 + 4 = 101$

I know that 27 is $20 + 7$, and 74 is $70 + 4$. So, I add $20 + 70$, which is 90, and $7 + 4$ is 11. Then I add $90 + 11$, which is 101.

Lesson Answers: none

Lesson 23—Student Worksheet

Closest



to
100

Catherine and her friends are playing a game. They want to see whose answer can come closest to 100. Using the ten-sided dice, roll the dice and fill in the first gray box with the number. Roll the dice again and fill in the second gray box. Then roll a third and fourth time and fill in the gray boxes on the next line. (Roll the dice again if you roll a 10.) Then add the two numbers together using any mental math strategy that you like. Repeat this activity for each person. The player whose answer is closest to 100 (whether over or under) is the winner!

<p>Catherine</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Raphael</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Anthony</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>
<p>Sasha</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Chen</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Kaylee</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>
<p>David</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Amara</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>	<p>Camila</p>  <div style="display: flex; justify-content: center; gap: 10px;"> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div> <div style="display: flex; justify-content: center; gap: 10px; margin-top: 5px;"> + <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> <div style="border: 1px solid gray; width: 30px; height: 30px;"></div> </div>

Answers will vary.

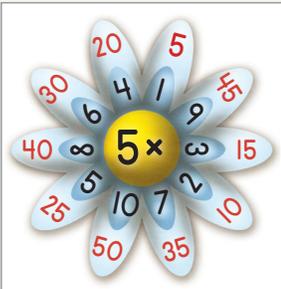
Lesson 24—Expressions of Time

Daily Dose

Mental Math: Solve using any strategy of your choice.

64	38	46	56
+ 23	+ 51	+ 34	+ 46
87	89	80	102

Flower Power:
Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.



My Math Journal Answers: Page 54

TIME

INTERVALS

Second:
The amount of time it takes to say...
one alligator

Minute:
60 seconds

Hour:
60 minutes

Quarter Hour:
15 minutes

Half Hour:
30 minutes

Quarter To:
15 minutes to the next hour.



Quarter After:
15 minutes after the hour.

Half Past:
30 minutes after the hour.

Lesson Answers:

- (a) 60 seconds (b) 60 minutes (c) 60 minutes
 (d) 2 halves (e) 30 minutes (f) 9:30
 (g) 3:30, half past three; 5:30, half past five; 11:30, half past eleven (h) 15 minutes
 (i) 5:15 (j) 2:15 (k) quarter after two (l) 15 minutes (m) 7:45 (n) quarter to eight
 (o) 8:45, quarter to nine; 4:15, quarter after four; 7:15, quarter after seven; 4:45, quarter to five

Lesson 24—Student Worksheet

Telling Time

For each clock below, write the time in the box provided. Then draw a line from each clock to the correct phrase for telling time using "half past," "quarter to," and "quarter after."








2:30

9:15

2:45

4:15

5:45

9:30

half past nine

quarter to six

quarter after nine

half past two

quarter to three

quarter after four

Read each story problem. Draw the hands on each analog clock to show the time mentioned in the story. Write the time in the box provided.

Catherine woke up at half past seven and started getting ready for the day.



7:30

At quarter to ten, Catherine began helping her mother with the morning chores.



9:45

Catherine ate lunch under the large oak tree in her backyard at quarter after twelve.



12:15

Catherine played with her baby sister, Sarah, at half past one.



1:30

Lesson 25—Intervals of Time

Daily Dose

Shape Review: Name each shape, and then circle the quadrilaterals.


rectangle


pentagon


ellipse


square


parallelogram


circle


hexagon


triangle


octagon


trapezoid

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$5 \times \square =$	$5 \times \square =$
$5 \times \square =$	$5 \times \square =$
$5 \times \square =$	$5 \times \square =$
$5 \times \square =$	$5 \times \square =$

Answers will vary.

Lesson Answers:

(a) 21 minutes (b) 56 minutes (c) 26 minutes

Lesson 26—Multiplying by 6

Daily Dose

Elapsed Time: Write the times shown on the two clocks. Then write how much time has elapsed.



6:05



6:52

47 minutes
Elapsed Time

Money: Add the amounts of money shown.

$$\begin{array}{r} \$5.38 \\ + \$4.19 \\ \hline \$9.57 \end{array}$$

$$\begin{array}{r} \$6.98 \\ + \$9.55 \\ \hline \$16.53 \end{array}$$

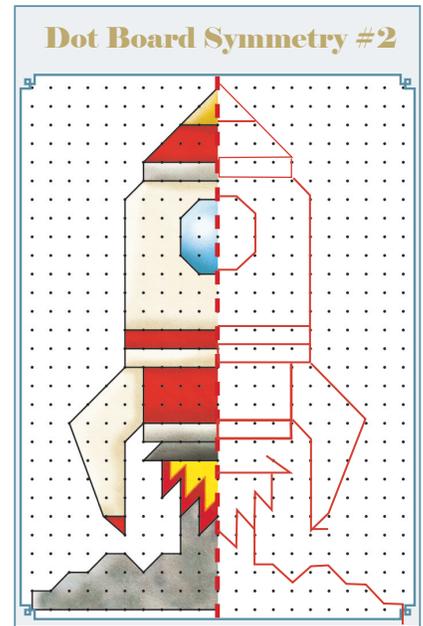
Write the product.

$\begin{array}{r} 6 \\ \times 5 \\ \hline 30 \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array}$	$\begin{array}{r} 9 \\ \times 5 \\ \hline 45 \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$	$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$	$\begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array}$
---	---	---	---	---	---

My Math Journal Answers: Page 31

2	3	4	5	6	7	8	9	10	11
				6					
				12					
				18					
				24					
				30					
				36					
				42					
				48					
				54					
				60					
				66					
				72					

Bonus Activity Answers:



Lesson Answers:

- (a) 6 (b) 4 (c) $4 \times 6 = 24$ (d) $1 \times 6 = 6$ $2 \times 6 = 12$ $3 \times 6 = 18$ $4 \times 6 = 24$ $5 \times 6 = 30$
 $6 \times 6 = 36$ $7 \times 6 = 42$ $8 \times 6 = 48$ $9 \times 6 = 54$ $10 \times 6 = 60$

Lesson 26—Student Worksheet

Silly Sixes Farm

Decode the answer to the joke by solving the problems to discover the key.



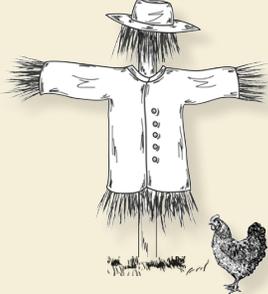

$8 \times 6 = 48$		$2 \times 6 = 12$		$1 \times 6 = 6$	
$3 \times 6 = 18$		$11 \times 6 = 66$		$10 \times 6 = 60$	
$12 \times 6 = 72$		$4 \times 6 = 24$		$5 \times 6 = 30$	
$6 \times 6 = 36$		$9 \times 6 = 54$		$7 \times 6 = 42$	

What is a scarecrow's favorite treat?



$\frac{s}{72} \frac{t}{66} \frac{r}{6} \frac{a}{48} \frac{w}{30} - \frac{b}{60} \frac{e}{24} \frac{r}{6} \frac{r}{6} \frac{y}{18}$

$\frac{s}{72} \frac{h}{12} \frac{o}{54} \frac{r}{6} \frac{t}{66} \quad \frac{c}{36} \frac{a}{48} \frac{k}{42} \frac{e}{24}$



Lesson 27—More Arrays

Daily Dose

Review Metric Measurements: Write the equivalent measurement for each metric measurement of length.

10 mm = 1 cm 90 mm = 9 cm

50 mm = 5 cm 40 mm = 4 cm

80 mm = 8 cm 60 mm = 6 cm

Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

6	6	6	6	6	6	6	6	6
×3	×8	×5	×6	×9	×4	×7	×2	
18	48	30	36	54	24	42	12	

54 48 42 30 18 12 24 36

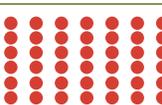
Bonus Activity
Answers:

5	1	9	7	6	8	2	4	3
3	6	4	1	5	2	7	9	8
2	7	8	9	3	4	5	6	1
1	8	3	4	2	5	6	7	9
9	5	2	3	7	6	8	1	4
7	4	6	8	9	1	3	2	5
8	9	5	2	1	7	4	3	6
4	2	1	6	8	3	9	5	7
6	3	7	5	4	9	1	8	2

Lesson Answers:

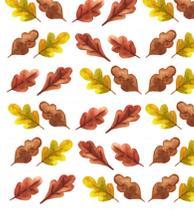
(a)  $4 \times 6 = 24$

(b)  $6 \times 7 = 42$

(c)  $6 \times 8 = 48$

(d) 1.  $5 \times 6 = 30$

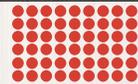
2.  $6 \times 9 = 54$

3.  $6 \times 6 = 36$

Lesson 27—Student Worksheet

Missing Parts

Some of the chart is missing. Fill in the empty spaces so each row has a corresponding addition problem, array, and multiplication problem. Then solve all the addition and multiplication problems.

Addition Equations	Arrays	Multiplication Equations
$5 + 5 + 5 + 5 + 5 + 5 = 35$		$7 \times 5 = 35$
$8 + 8 + 8 + 8 = 32$		$4 \times 8 = 32$
$9 + 9 + 9 + 9 + 9 = 54$		$6 \times 9 = 54$
$4 + 4 + 4 + 4 + 4 + 4 = 28$		$7 \times 4 = 28$
$6 + 6 + 6 + 6 + 6 = 30$		$5 \times 6 = 30$
$4 + 4 + 4 + 4 + 4 + 4 = 24$		$6 \times 4 = 24$
$8 + 8 + 8 + 8 + 8 = 40$		$5 \times 8 = 40$
$7 + 7 + 7 + 7 + 7 + 7 = 42$		$6 \times 7 = 42$

Lesson 28—Metric System and Multiplication

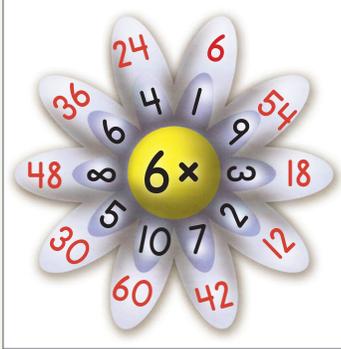
Daily Dose

Mental Math: Solve using any strategy of your choice.

$$\begin{array}{r} 72 \\ + 19 \\ \hline 91 \end{array} \quad \begin{array}{r} 38 \\ + 44 \\ \hline 82 \end{array} \quad \begin{array}{r} 94 \\ + 23 \\ \hline 117 \end{array} \quad \begin{array}{r} 85 \\ + 95 \\ \hline 180 \end{array}$$

Flower Power:

Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.



Lesson Answers:

- (a) $6 \times 9 \text{ cm} = 54 \text{ cm}$ (b) $5 \times 8 \text{ cm} = 40 \text{ cm}$
 (c) $3 \times 9 \text{ cm} = 27 \text{ cm}$ (d) 100 cm (e) 10 (f) $6 \times 3 \text{ m} = 18 \text{ m}$
 (g) $4 \times 5 \text{ m} = 20 \text{ m}$ (h) $7 \times 3 \text{ m} = 21 \text{ m}$

Bonus Activity Answers:

Study this painting by Walt Curlee and write the coordinates for where you can find the following mathematical elements. There may be more than one correct answer. Some items may appear more than once. Write your answers in the applicable grid spaces on the answer.

Possible Answers

6×7	B,3
2×4	E,3
Symmetry	E,3
Millions	A,4
Cone	B,2
Thousands	E,2
Hundreds	A,1
7×2	C,3

Search and Find

Home of Plenty by Walt Curlee (1956-Hunt) 2014

Lesson 28—Student Worksheet

Buying Yarn

You are buying yarn at the store. Each skein of yarn has a label that shows the full length of the yarn. Solve the problems to see how much yarn you would have if you bought the number of skeins indicated.

Example

$$4 \times \text{orange skein} = 20 \text{ m}$$

$$6 \times \text{purple skein} = 48 \text{ m} \quad 3 \times \text{light blue skein} = 12 \text{ m} \quad 3 \times \text{orange skein} = 15 \text{ m} \quad 4 \times \text{green skein} = 28 \text{ m}$$

$$5 \times \text{blue skein} = 15 \text{ m} \quad 5 \times \text{orange skein} = 25 \text{ m} \quad 6 \times \text{brown skein} = 36 \text{ m} \quad 2 \times \text{purple skein} = 16 \text{ m}$$

$$2 \times \text{green skein} = 14 \text{ m} \quad 4 \times \text{pink skein} = 36 \text{ m} \quad 2 \times \text{blue skein} = 6 \text{ m} \quad 6 \times \text{orange skein} = 30 \text{ m}$$

$$6 \times \text{blue skein} = 18 \text{ m} \quad 6 \times \text{green skein} = 42 \text{ m} \quad 5 \times \text{pink skein} = 45 \text{ m} \quad 6 \times \text{purple skein} = 54 \text{ m}$$

Lesson 29—Volume: Real-Life Examples

Daily Dose

Round to the Nearest Tens Place:

652	189	823	347	414	576
650	190	820	350	410	580

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$6 \times \square =$	$6 \times \square =$
$6 \times \square =$	$6 \times \square =$
$6 \times \square =$	$6 \times \square =$
$6 \times \square =$	$6 \times \square =$

Answers will vary.

Student Worksheet Answers:

Equivalent Volumes

Match the equivalent (equal) volumes under each unit by drawing a line from the volume on the left to the matching volume on the right. Use scratch paper or the dry-erase board to work out calculations as needed.



2 gallons — 12 quarts
5 gallons — 8 quarts
3 gallons — 16 quarts
4 gallons — 20 quarts



2 pints — 14 cups
7 pints — 8 cups
4 pints — 20 cups
10 pints — 4 cups



4 quarts — 10 pints
5 quarts — 6 pints
2 quarts — 8 pints
3 quarts — 4 pints



6 pints — 16 cups
1 gallon — 8 cups
2 quarts — 12 cups
2 pints — 4 cups

Lesson Answers:

- (a) 4 quarts
(b) $5 \times 2 = 10$ pints
(c) $4 \times 4 = 16$ cups
(d) $4 \times 2 = 8$ cups
(e) $5 \times 2 = 10$ pints

Lesson 30—Multiplying with Unknowns

Daily Dose

Mixed Fraction Practice:
Write the shaded fractions shown in the circles below.



$\frac{7}{10}$



$\frac{2}{7}$

Color in each circle for the fractions shown.

$\frac{3}{8}$



$\frac{2}{3}$



Solve:

$3 \times 6 = 18$	$1 \times 6 = 6$	$7 \times 6 = 42$
$9 \times 6 = 54$	$5 \times 6 = 30$	$2 \times 6 = 12$

Student Worksheet Answers:

Solving for Spilled Milk

Oh! The milk spilled! Using drawings, manipulatives, or skip counting, identify the covered number in each problem. Write the number on top of the milk spot.

$4 \times 4 = 16$

$6 \times 7 = 42$

$5 \times 6 = 30$

$3 \times 5 = 15$

$5 \times 5 = 25$

$3 \times 8 = 24$

$6 \times 3 = 18$

$9 \times 4 = 36$

$6 \times 2 = 12$

$7 \times 2 = 14$

$4 \times 7 = 28$

$9 \times 3 = 27$

Lesson Answers:

- (a) 4 (b) 4 (c) star = 4 (d) moon = 6 (e) heart = 9, cone = 4, hexagon = 7

Lesson 31—Multiplication and Money

Daily Dose

Shape Review: Draw each quadrilateral listed.

square parallelogram rhombus rectangle trapezoid



Multiplication Bingo (Multiplying by 6):

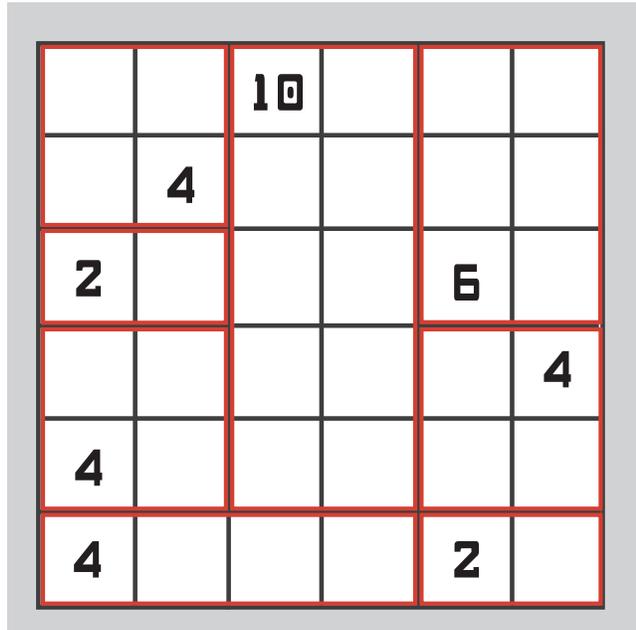
Roll the ten-sided dice and set it in the empty square below. Then solve the fact and color in the product. Continue until you have colored four colored boxes in a row (across, down, or diagonally).

54	30	6	36
6	24	18	30
12	18	54	18
24	42	36	12

Answers will vary.

6 × =

Bonus Activity Answers:



Lesson 31—Student Worksheet



Crisscross

Multiplication Practice

Fill in the missing blanks in the multiplication crossword puzzle. Start with the multiplication problems that have both factors listed. After those are solved, you will be able to solve the remaining problems.





2	×	6	=	12
×				
8				
=				

6	×	5	=	30
×		35		
3				

6	×	7	=	42
18				

5				
3	×	2	=	6
7				
×				

4	×	4	=	16
=				
24				

9	×	6	=	54
=				
8				
=				
48				

6	×	6	=	36
---	---	---	---	----

Lesson 32—Intervals of Time: End Time

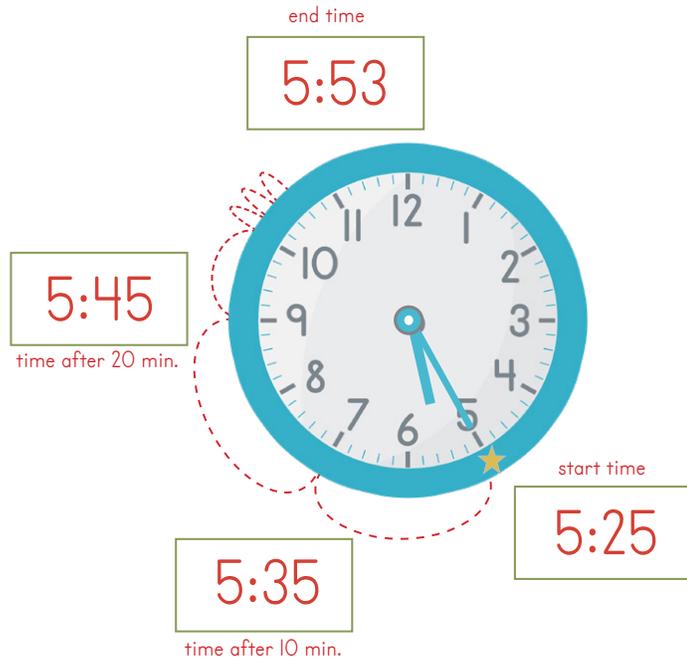
Daily Dose

Mental Math: Add the following numbers using a mental math strategy of your choice.

$$\begin{array}{r} 53 \\ + 37 \\ \hline 90 \end{array} \quad \begin{array}{r} 49 \\ + 42 \\ \hline 91 \end{array} \quad \begin{array}{r} 31 \\ + 58 \\ \hline 89 \end{array} \quad \begin{array}{r} 27 \\ + 25 \\ \hline 52 \end{array}$$

Solve:

$$\begin{array}{r} 7 \\ \times 6 \\ \hline 42 \end{array} \quad \begin{array}{r} 3 \\ \times 6 \\ \hline 18 \end{array} \quad \begin{array}{r} 8 \\ \times 6 \\ \hline 48 \end{array} \quad \begin{array}{r} 5 \\ \times 6 \\ \hline 30 \end{array} \quad \begin{array}{r} 0 \\ \times 6 \\ \hline 0 \end{array} \quad \begin{array}{r} 9 \\ \times 6 \\ \hline 54 \end{array}$$



Lesson Answers:

(a) 5:25 AM (b) 28 minutes (c) 6:37 AM (d) 7:51 AM (e) 8:56 AM (f) 11:59 AM

Optional Lesson Extension Answers: Answers will vary.

Lesson 32—Student Worksheet

Life Farm

Using the start time and elapsed time listed, find the end time for each of the farm tasks below. You can use a dry-erase board or the blank clock from the Appendix if needed.



The farmer collected eggs from the chicken coop. It took him 25 minutes. He started at 6:10 AM. At what time did he finish?

Time
6:35 AM



Another farmer fed the chickens and ducks. It took her 20 minutes. She started at 6:05 AM. At what time did she finish?

Time
6:25 AM



Next, the farmer sheared his sheep. It took him 45 minutes. He started at 7:02 AM. At what time did he finish?

Time
7:47 AM



The farmer went out to the barn to milk the cows. It took her 32 minutes. She started at 7:10 AM. At what time did she finish?

Time
7:42 AM



After shearing, the farmer cleaned out the horse stalls. It took him 52 minutes. He started at 9:05 AM. At what time did he finish?

Time
9:57 AM



Next, the farmer harvested fruits and vegetables. It took her 45 minutes. She started at 9:15 AM. At what time did she finish?

Time
10:00 AM



The farmer went out to clear the field on his tractor. It took him 48 minutes. He started at 11:07 AM. At what time did he finish?

Time
11:55 AM



The farmer took the fruits and vegetables to the farmers' market. She was at the farmers' market selling produce for 55 minutes. She arrived at 11:02 AM. At what time did she leave the market?

Time
11:57 AM

Lesson 33—Associative Property of Multiplication

Daily Dose

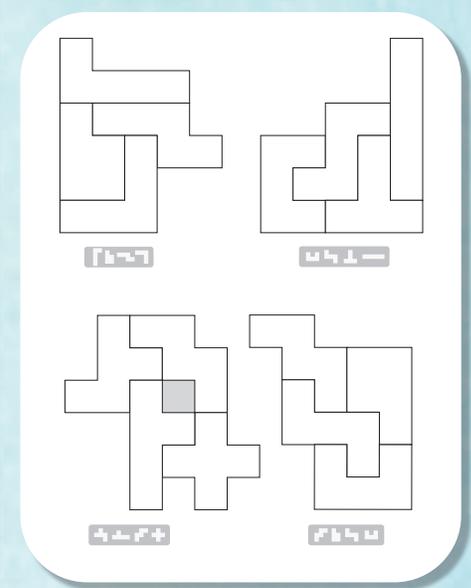
Elapsed Time: Write the time shown on the Start Time clock. Using the amount of elapsed time, find the end time and write it in the End Time box. Then draw the hands on the clock.

Start Time:  7:12	Elapsed Time: 35 min.	End Time:  7:47
Start Time:  10:10	Elapsed Time: 46 min.	End Time:  10:56

Missing Factor: Fill in the missing factors.

$\frac{6}{\times 4} = 24$	$\frac{6}{\times 6} = 36$	$\frac{6}{\times 2} = 12$	$\frac{6}{\times 7} = 42$	$\frac{6}{\times 5} = 30$	$\frac{6}{\times 9} = 54$
---------------------------	---------------------------	---------------------------	---------------------------	---------------------------	---------------------------

Bonus Activity Answers:



4

Lesson Answers:

(a) 24 (b) 24 (c) 28, 48, 4×2 highlighted (d) $6 \times 2 \times 3$ circled, $3 + 5 \times 8$ crossed out, $3 \times 9 - 10$ crossed out, $3 \times 3 \times 2$ circled

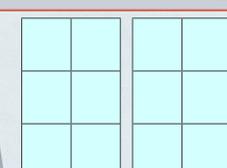
Lesson 33—Student Worksheet

Associative Property
of
Multiplication

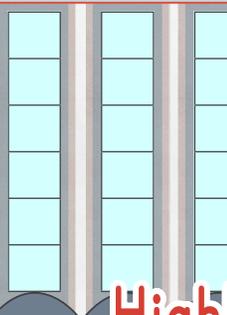


Look at the arrays on the left. For each problem, find the product for the array listed first, and then multiply that product by the number of times the array is shown. For the problems below, use a highlighter to highlight the two numbers you will multiply first, and then solve each multiplication problem. The first one is done for you.

$3 \times 2 \times 2 = 12$



$6 \times 1 \times 3 = 18$



$6 \times 2 \times 4 = 48$

$9 \times 0 \times 6 = 0$

$7 \times 2 \times 2 = 28$

$5 \times 1 \times 6 = 30$

$3 \times 1 \times 9 = 27$

$10 \times 2 \times 3 = 60$

$3 \times 1 \times 4 = 12$

$7 \times 6 \times 0 = 0$

$1 \times 4 \times 6 = 24$

$1 \times 8 \times 5 = 40$

$3 \times 10 \times 3 = 90$

$6 \times 2 \times 5 = 60$

Highlighted areas may vary.

Lesson 34—Square Numbers

Daily Dose

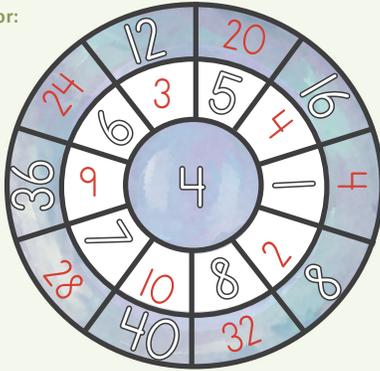
Mr. Gallon Story Review: Write the equivalent amount for each measurement.

3 gallons = pints 6 pints = quarts

4 quarts = cups 12 cups = quarts

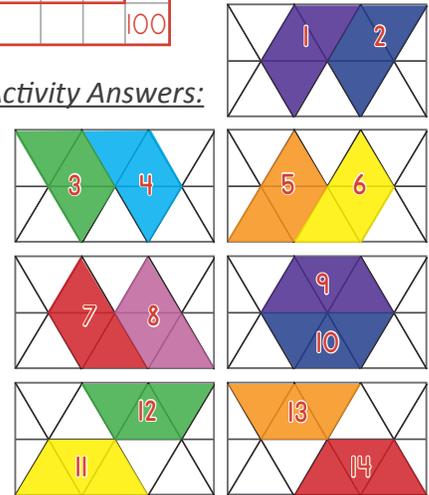
Missing Factor:

Each outer circle is obtained by multiplying the number in the blue inner circle by the number in the adjacent section of the white circle. Fill in the blank spaces with the correct answers.



1 × 1	1																			
2 × 2		4																		
3 × 3			9																	
4 × 4				16																
5 × 5					25															
6 × 6						36														
7 × 7							49													
8 × 8								64												
9 × 9									81											
10 × 10																				100

Bonus Activity Answers:



Lesson Answers:

(a) 2×2 (b) 4 (c) 3×3 (d) 9 (e) see image on the top right (f) 64

Lesson 34—Student Worksheet





Fill in the blanks with the correct products. Then set a timer for 5 minutes and see how much of the remainder of the multiplication chart you can fill in.

	1	2	3	4	5	6	7	8	9	10
1	1 × 1 1	2	3	4	5	6	7	8	9	10
2	2	2 × 2 4	6	8	10	12	14	16	18	20
3	3	6	3 × 3 9	12	15	18	21	24	27	30
4	4	8	12	4 × 4 16	20	24	28	32	36	40
5	5	10	15	20	5 × 5 25	30	35	40	45	50
6	6	12	18	24	30	6 × 6 36	42	48	54	60
7	7	14	21	28	35	42	7 × 7 49	56	63	70
8	8	16	24	32	40	48	56	8 × 8 64	72	80
9	9	18	27	36	45	54	63	72	9 × 9 81	90
10	10	20	30	40	50	60	70	80	90	10 × 10 100

Lesson 35—Section Review: Game Day

Daily Dose

Elapsed Time: Write the time shown on the Start Time clock. Using the amount of elapsed time, find the end time. Write the end time in the box and draw the hands on the End Time clock.

Start Time:



4:31

Elapsed Time:

17 min.

End Time:



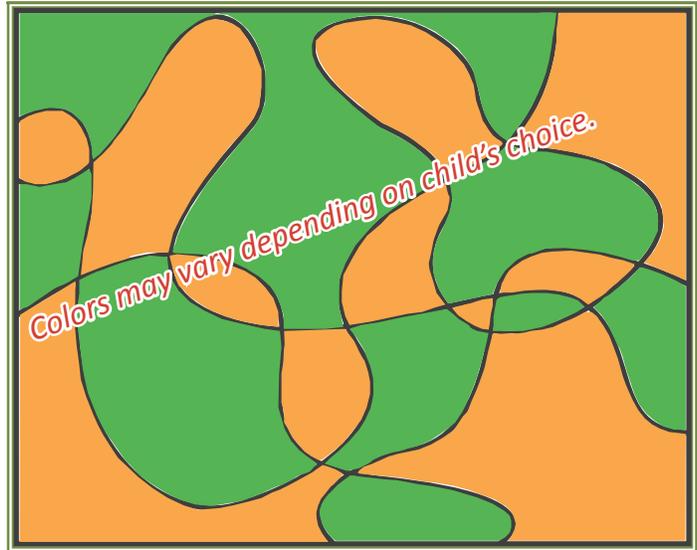
4:48

Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

3	5	4	6	9	8	7	10
$\times 3$	$\times 5$	$\times 4$	$\times 6$	$\times 9$	$\times 8$	$\times 7$	$\times 10$
9	25	16	36	81	64	49	100

64	36	25	9	49	16	100	81
----	----	----	---	----	----	-----	----

Bonus Activity Answers:



Lesson 35—Student Worksheet

Solve the multiplication problems for each of the clues listed. Then write the word form of each product according to the number indicated in the crossword puzzle. (One number word is used twice.) After completing the whole crossword puzzle, copy the letters from each of the colored boxes into the coordinating colored boxes below to find the answer to the trivia question.

Word Bank

twelve	forty
sixteen	seven
twenty-one	twenty-four
twenty	twenty-seven
fifteen	thirty-five
forty-two	fifty-four
zero	thirty
thirty-six	

Across

- $1 \times 12 =$
- $7 \times 1 =$
- $3 \times 7 =$
- $6 \times 7 =$
- $10 \times 4 =$
- $0 \times 9 =$
- $12 \times 2 =$
- $9 \times 3 =$
- $9 \times 4 =$
- $4 \times 5 =$

Down

- $3 \times 10 =$
- $2 \times 8 =$
- $4 \times 5 =$
- $5 \times 3 =$
- $8 \times 6 =$
- $8 \times 0 =$

How many states does the Appalachian Trail pass through?
 f o u r t e e n



Crossword Clues

Lesson 36—Section Assessment

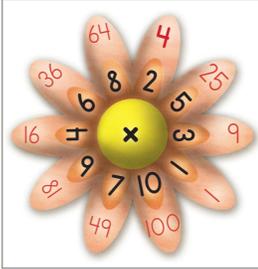
Daily Dose

Measurement: Think about how big an inch, a foot, and a yard are. Then circle the unit that would be best for measuring.

- a book inches feet yards
- the height of a door feet inches yards
- the length of a football field yards feet inches

Flower Power—Numbers Squared:

Find the square of each number. For example, if the petal shows the number 2, find the square of the number 2 ($2 \times 2 = 4$). Then write the product for each multiplication problem on the corresponding large petal.



Lesson Answers:

Guided Assessment:

1) cherries: $5 \times 3 = 15$; tomatoes: $7 \times 5 = 35$; raspberries: $3 \times 4 = 12$

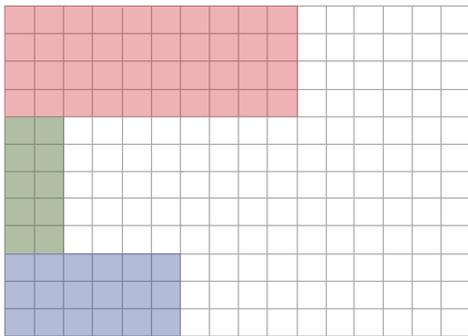
2) $69 + 23 = 92$; $34 + 41 = 75$; $77 + 21 = 98$; $38 + 54 = 92$

Independent Assessment

Find the product. You may use skip counting or draw tally marks as needed. 15 points possible

$7 \times 1 = 7$	$8 \times 4 = 32$	$9 \times 0 = 0$	$6 \times 2 = 12$	$3 \times 9 = 27$
$4 \times 1 = 4$	$8 \times 10 = 80$	$6 \times 5 = 30$	$2 \times 7 = 14$	$3 \times 3 = 9$
$4 \times 6 = 24$	$10 \times 7 = 70$	$4 \times 4 = 16$	$2 \times 10 = 20$	$9 \times 4 = 36$

Look at the rectangles shown below. Write the multiplication problem and answer that represent the total number of squares in each array on the line provided to the right. 3 points possible



$4 \times 10 = 40$

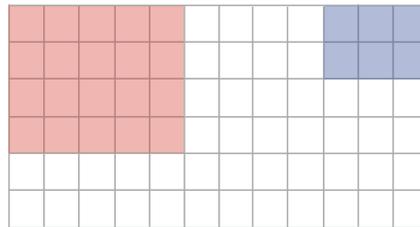
$5 \times 2 = 10$

$3 \times 6 = 18$

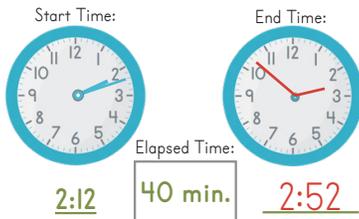
Color in two arrays in the following grid to represent the two multiplication problems listed below. 2 points possible

$4 \times 5 = 20$

$2 \times 3 = 6$



Find the end times. 2 points possible



Fill in the blank on each metric system conversion. 2 points possible

10 mm = 1 cm 100 cm = 1 m

1 = 4 4 = 2

6 = 3

Look at the gallon, quarts, pints, and cups to the right. Fill in the blank on each imperial system conversion. 3 points

Lesson 37—Place Value Through the Millions

Student Worksheet Answers:

Daily Dose

Mental Math: Add the following numbers using a mental math strategy of your choice.

72	18	55	81
+ 29	+ 43	+ 37	+ 28
101	61	92	109

Roll the Dice—Squares: For each problem, roll the ten-sided dice and write that number in the two boxes placed on top of each other. Then solve the problem. The first one is done for you.

5					
×	5	×		×	
25					

Answers will vary.





Spin & Regroup

Place the tip of your pencil through the end of a paper clip. Set the pencil tip in the middle of one of the above wheels. Spin the paperclip around the tip of the pencil; the number on which it lands is the one you will use to fill in the blank of the math problem. Then solve.

Note: Use the spinner on the left for subtraction problems and the one on the right for addition problems.

$\begin{array}{r} 399 \\ + \square \\ \hline \end{array}$	$\begin{array}{r} 796 \\ - \square \\ \hline \end{array}$	$\begin{array}{r} \text{LIGH} \\ + \square \\ \hline \end{array}$	$\begin{array}{r} 810 \\ - \square \\ \hline \end{array}$
$\begin{array}{r} 1,000 \\ - \square \\ \hline \end{array}$	$\begin{array}{r} 372 \\ + \square \\ \hline \end{array}$	$\begin{array}{r} 952 \\ - \square \\ \hline \end{array}$	$\begin{array}{r} 189 \\ + \square \\ \hline \end{array}$

Answers will vary.

Lesson Answers:

(a) 7 (b) Ten and hundred are repeated. (c) Ten Millions; Hundred Millions (d) 1,246,583

(e) $4,392,675 = 4,000,000 + 300,000 + 90,000 + 2,000 + 600 + 70 + 5$
 $9,817,423 = 9,000,000 + 800,000 + 10,000 + 7,000 + 400 + 20 + 3$
 $7,296,518 = 7,000,000 + 200,000 + 90,000 + 6,000 + 500 + 10 + 8$
 $6,192,845 = 6,000,000 + 100,000 + 90,000 + 2,000 + 800 + 40 + 5$

Lesson 37—Bonus Activity

Squares & Kite Strings










Answers will vary.

Set the timer for five minutes. Roll the ten-sided dice. Multiply the number rolled by itself. Find the kite that has the answer on it. Draw a small bow somewhere along the kite's string. Roll the dice and continue as before. If your roll results in an answer leading you to a kite that already has a bow on it, draw another one. If you roll a one, cross off one bow. If you roll a 10, place a bow on any kite. When the timer rings, the kite with the most bows wins!

Lesson 39—Number Words

Daily Dose

Subtract:

$\begin{array}{r} 411 \\ 524 \\ -236 \\ \hline 288 \end{array}$	$\begin{array}{r} 879 \\ -357 \\ \hline 522 \end{array}$	$\begin{array}{r} 5 \\ 762 \\ -449 \\ \hline 313 \end{array}$	$\begin{array}{r} 312 \\ 436 \\ -198 \\ \hline 238 \end{array}$
---	--	---	---

Multiplication Bingo (Squares):

Roll the ten-sided dice and multiply the number rolled by itself. For example, if you rolled a 5, you would multiply 5×5 . Then color in the product on the bingo board. Continue until you color four boxes in a row (across, down, or diagonally).

1	16	100	4
81	25	1	64
1	64	36	81
36	9	25	16

Answers will vary.

Lesson Answers:

(a) after each group

Optional Lesson Extension Answers: Answers will vary.

My Math Journal Answers: Pages 13 and 11

WORDS

20	twenty
30	thirty
40	forty
50	fifty

60	sixty
70	seventy
80	eighty
90	ninety

100 → one hundred

1,000 → one thousand

1,000,000 → one million

1,000,000,000 → one billion

NUMBER FORMS

Standard Form: _____
67,301

Expanded Form: _____
 $60,000 + 7,000 + 300 + 1$

Word Form: _____
sixty-seven thousand, three hundred one

Lesson 39—Student Worksheet

Number Forms

7,891,085

Seven million, eight hundred ninety-one thousand, eighty-five

7,000,000 + 800,000 + 90,000 + 1,000 + 80 + 5

42,597,832

Forty-two million, five hundred ninety-seven thousand, eight hundred thirty-two

40,000,000 + 2,000,000 + 500,000 + 90,000 + 7,000 + 800 + 30 + 2

168,742,319,250

One hundred sixty-eight billion, seven hundred forty-two million, three hundred nineteen thousand, two hundred fifty

100,000,000,000 + 60,000,000,000 + 8,000,000,000 + 700,000,000 + 40,000,000 + 2,000,000 + 300,000 + 10,000 + 9,000 + 200 + 50

599,213,476,311

Five hundred ninety-nine billion, two hundred thirteen million, four hundred seventy-six thousand, three hundred eleven.

500,000,000,000 + 90,000,000,000 + 9,000,000,000 + 200,000,000 + 10,000,000 + 3,000,000 + 400,000 + 70,000 + 6,000 + 300 + 10 + 1

Lesson 40—Multiplying by 7

Daily Dose

Money Review:

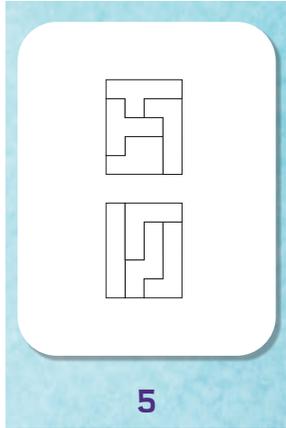
$$\begin{array}{r} \$3.54 \\ + \$2.87 \\ \hline \$6.41 \end{array} \quad \begin{array}{r} \$9.31 \\ + \$3.63 \\ \hline \$12.94 \end{array} \quad \begin{array}{r} \$5.73 \\ + \$4.97 \\ \hline \$10.70 \end{array} \quad \begin{array}{r} \$2.34 \\ + \$4.09 \\ \hline \$6.43 \end{array}$$

Solve:

$$4 \times 4 = 16 \quad 8 \times 8 = 64 \quad 6 \times 6 = 36$$

$$2 \times 2 = 4 \quad 7 \times 7 = 49 \quad 10 \times 10 = 100$$

Bonus
Activity
Answers:



Lesson Answers:

- (a) 70, 63, 56, 49, 42, 35, 28, 21, 14, 7 (b) 3 weeks
(c) $5 \times 7 = 35$ days (d) $9 \times 7 = 63$ days

My Math Journal Answers: Page 31

x	1	2	3	4	5	6	7	8	9	10	11	12
1							7					
2							14					
3							21					
4							28					
5							35					
6							42					
7							49					
8							56					
9							63					
10							70					
11							77					
12							84					

Lesson 40—Student Worksheet

What a Year!

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

June

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

You have a busy year planned with lots of fun activities. Using the calendar to the left, multiply the number of weeks between events by 7 days in a week. Your answer will be the total number of days from one event to the other.

How many days are there from...

to

 $3 \times 7 = 21$

Weeks Days in a week Total days

to

 $7 \times 7 = 49$

Weeks Days in a week Total days

to

 $8 \times 7 = 56$

Weeks Days in a week Total days

to

 $5 \times 7 = 35$

Weeks Days in a week Total days

to

 $4 \times 7 = 28$

Weeks Days in a week Total days

to

 $6 \times 7 = 42$

Weeks Days in a week Total days

to

 $9 \times 7 = 63$

Weeks Days in a week Total days

to

 $2 \times 7 = 14$

Weeks Days in a week Total days

Lesson 42—Intervals of Time: Start Time

Daily Dose

Find the Sums:

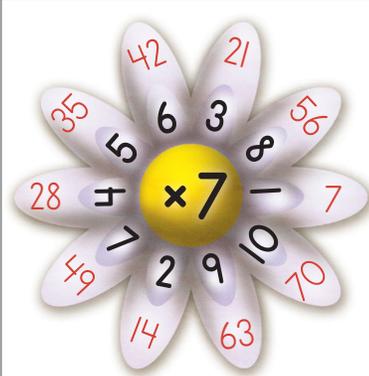
$$\begin{array}{r} 4,289 \\ + 1,431 \\ \hline 5,720 \end{array}$$

$$\begin{array}{r} 2,729 \\ + 1,578 \\ \hline 4,307 \end{array}$$

$$\begin{array}{r} 3,981 \\ + 2,527 \\ \hline 6,508 \end{array}$$

Flower Power:

Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal.



Lesson Answers:

(a) 3 tens (b) 6:15 AM (c) 6:25 AM (d) 7:06 PM
(e) 8:07 PM (f) four; spring, summer, fall [or autumn], winter (g) See the chart below.

Time of Year ¹	Sunrise Time	Sunset Time
Spring Equinox March 20, 2019	5:40 AM	5:47 PM
Summer Solstice June 20, 2019	5:16 AM	5:59 PM
Fall Equinox September 23, 2019	5:25 AM	5:31 PM
Winter Solstice December 21, 2019	5:47 AM	5:20 PM

1. Time and Date AS, "San Jose, Costa Rica—Sunrise, Sunset, and Daylength," timeanddate.com/sun/costa-rica/san-jose.

Lesson 42—Student Worksheet

Sunrise
and
Sunset

For each set of clocks, identify the start time by counting back from the end time, using the number of elapsed minutes. Write the start time in the box and fill in the hands on the clock to show the start time also.

start time



7:07

25 min.
elapsed time

end time



7:32

start time



8:09

43 min.
elapsed time

end time



8:52

start time



6:08

37 min.
elapsed time

end time



6:45

start time



5:05

49 min.
elapsed time

end time



5:54

start time



5:27

32 min.
elapsed time

end time



5:59

start time



7:21

27 min.
elapsed time

end time



7:48

Lesson 43—Rounding to Nearest Dollar

Daily Dose

Expanded Form: Write the number in expanded form.

56,309

$$\begin{array}{r} 50,000 + 6,000 + \\ 300 + 9 \end{array}$$

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

Answers will vary.

$$\begin{array}{l} 7 \times \square = \quad 7 \times \square = \\ 7 \times \square = \quad 7 \times \square = \\ 7 \times \square = \quad 7 \times \square = \\ \square = \quad 7 \times \square = \end{array}$$

Lesson Answers:

(a) toward the \$1.00

(b) toward the \$2.00

(c) \$4.00 and \$5.00 (d) \$5.00

(e) \$4.00 (f) \$26.00 (g) \$4.00

(h) \$12.58 = \$13.00, \$9.84 = \$10.00, \$41.19 = \$41.00, \$178.39 = \$178.00

Student Worksheet Answers:

Round each of the items below to the nearest dollar. Write your answer in the box provided.

Suppose you had \$50 to spend. Which of the items above would you choose to purchase?
Choose two of your favorite school supplies from above. About how much money would you need to buy these items?

Answers will vary.

Answers will vary.

Lesson 44—Rounding to the Thousands Place

Daily Dose

Elapsed Time: Use the elapsed time to find the start time.

Start Time:



3:15

Elapsed Time:

43 min.

End Time:



3:58

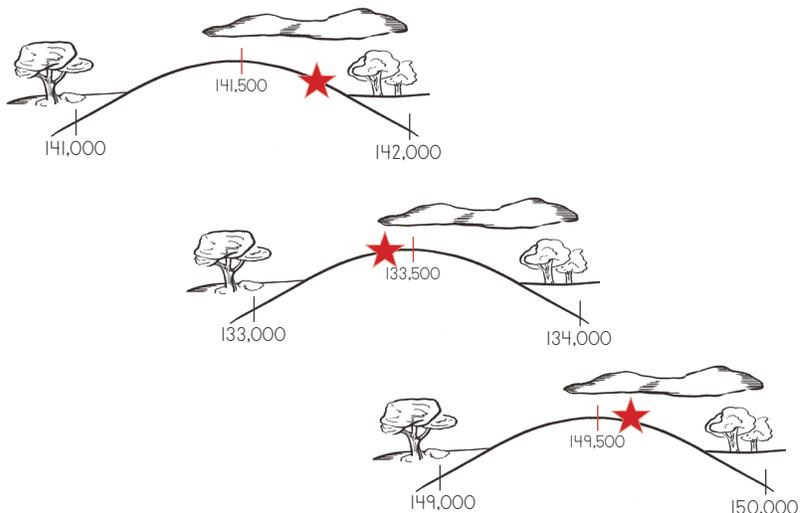
Multiplication Bingo (Multiplying by 7):

Roll the ten-sided dice and place the dice in the empty square below. Then solve the problem and color in the product. Continue until you have four colored boxes in a row (across, down, diagonal).

$7 \times \square =$

Answers will vary.

63	7	49	14
56		21	
	35	21	63
49	35	56	42



Lesson Answers:

(a) 500 (b) 180 (c) \$10.00 (d) 141,738

(e) See the first hill on the right.

(f) See the chart on the right. (g) See the second and third hills on the right as well as the chart. (h) 137,452 (i & j) See the chart on the right. (k) 470,000 (l) 806,300

Year	Bananas Harvested	Rounded to Thousands
2015	141,738 bananas	142,000
2016	133,421 bananas	133,000
2017	149,574 bananas	150,000
2018	137,452 bananas	137,000
2019	142,029 bananas	142,000

Lesson 44—Student Worksheet

Going Bananas

Bananas are leaving the plantation by the truckload. Round each load to the nearest number listed at left.

= 🍌 =

Thousand	4,309 4,000	5,783 6,000	26,538 27,000
Ten Thousand	76,027 80,000	30,481 30,000	98,924 100,000
Hundred	100,350 100,400	49,238 49,200	56,572 56,600

Review: Solve for the missing products and factors.

$6 \times 7 = 42$	$4 \times 7 = 28$	$8 \times 7 = 56$	$7 \times 7 = 49$
$5 \times 7 = 35$	$2 \times 7 = 14$	$10 \times 7 = 70$	$3 \times 7 = 21$

Lesson 45—Multi-Digit Subtraction

Daily Dose

Find the Sums:

$\begin{array}{r} 561,088 \\ + 362,953 \\ \hline 924,041 \end{array}$	$\begin{array}{r} 412,971 \\ + 285,540 \\ \hline 698,511 \end{array}$
---	---

Multiply:

$8 \times 7 = 56$	$5 \times 7 = 35$
$4 \times 7 = 28$	$3 \times 7 = 21$
$9 \times 7 = 63$	$6 \times 7 = 42$
$2 \times 7 = 14$	$7 \times 7 = 49$

Student Worksheet Answers:

Subtraction Crisscross Puzzle

Write the answer in the crisscross puzzle according to the number next to each problem. *Note: If the first digit of the difference (answer) is a zero, it should be removed and not used in the crisscross puzzle.*
Example: 045,687 becomes 45,687.

Down

1 $\begin{array}{r} 9,810 \\ - 8,037 \\ \hline 1,573 \end{array}$

2 $\begin{array}{r} 14,435 \\ - 591,744 \\ \hline 122,691 \end{array}$

3 $\begin{array}{r} 80,900 \\ - 34,511 \\ \hline 46,389 \end{array}$

4 $\begin{array}{r} 307,849 \\ - 211,055 \\ \hline 96,794 \end{array}$

5 $\begin{array}{r} 6,578 \\ - 38,065 \\ \hline 28,513 \end{array}$

6 $\begin{array}{r} 6,835,613 \\ - 1,374,834 \\ \hline 5,260,779 \end{array}$

7 $\begin{array}{r} 12,288,669 \\ - 10,639,513 \\ \hline 1,649,156 \end{array}$

Lesson Answers:

(a) 2 (b) no (c) 12 (d) no (e) 423 (f) four million, nine hundred eighty-seven thousand, one hundred forty-two (g) 7 (h) with the ones column (i) 4,195,624 (j) El Salvador population: 6,187,271; difference: 1,200,129 (k) Nicaragua population: 6,085,213; difference: 1,098,071

Lesson 46—Line Graphs

Daily Dose

Review Metric Measurements: Write the equivalent measurement for each metric measurement of length.

3 cm = 30 mm 70 mm = 7 cm

1 cm = 10 mm 40 mm = 4 cm

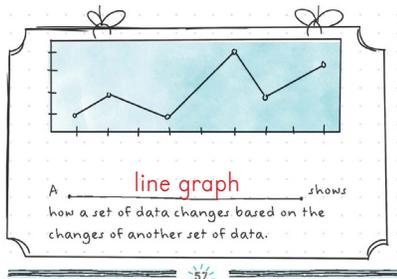
Find the Sum:

$$\begin{array}{r} 312,649 \\ + 98,035 \\ \hline 410,684 \end{array}$$

Missing Factor: Fill in the missing factors.

7	7	7	7	7	7
× 8	× 2	× 4	× 10	× 3	× 9
56	14	28	70	21	63

My Math Journal Answers: page 57



Lesson Answers:

- (a) population of Costa Rica (b) 10 years (c) number of people living in Costa Rica (d) 1 million (e) It increases. (f) no (g) slightly more than 3 million (h) about 5 million (i) Answers will vary but should be somewhere between 5 and 6 million.

Lesson 47—Multiplying by 8

Daily Dose

Round to the Nearest Thousand:

8,231 4,789 6,450 9,513

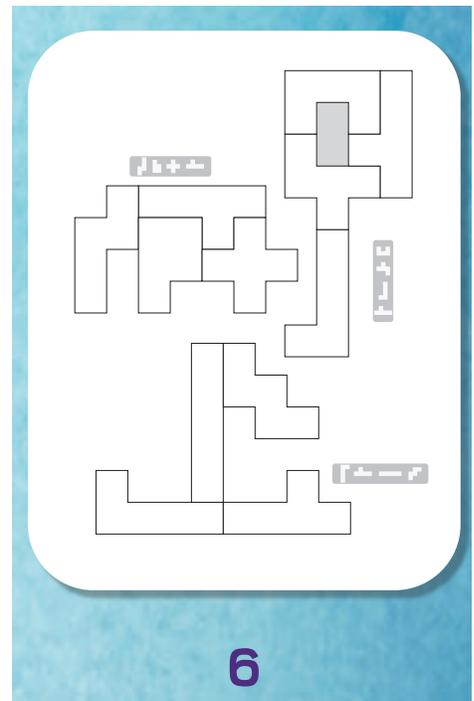
8,000 5,000 6,000 10,000

Missing Factor: Each outer circle is obtained by multiplying the number in the inner circle with the number in the adjacent part of the white circle. Fill in the blank spaces with the correct answers.

My Math Journal Answers: Page 31

4	5	6	7	8	9	10	11
				8			
				16			
				24			
				32			
				40			
				48			
				56			
				64			
				72			
				80			
				88			
				96			

Bonus Activity Answers:

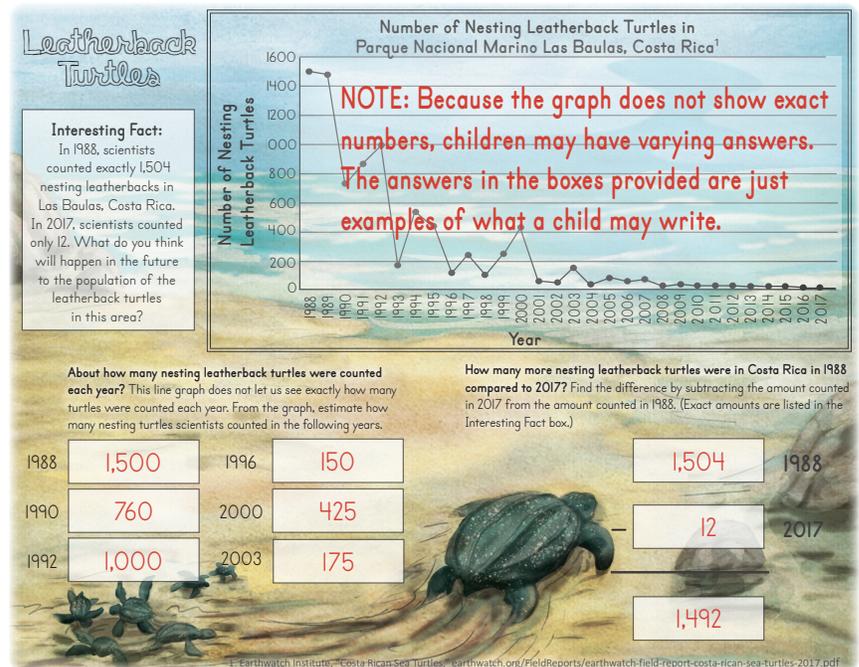


6

Lesson Answers:

- (a) 8 (b) 8, 16, 24, 32, 40, 48, 56, 64, 72, 80 (c) 24 (d) 48 (e) 72 (f) 32, 40, 64

Student Worksheet Answers:



Lesson 47—Student Worksheet

Multiplying with Octagons

All octagons have 8 sides. How many sides would 4 octagons have altogether? We can use multiplication to find the answer: 4 octagons times 8 sides equals 32 total sides. The green octagon below shows this equation.

Fill in the remaining octagons with equations that show the correct factors and products for finding the total number of sides.

4 Octagons

 $4 \times 8 = 32$

5 Octagons

 $5 \times 8 = 40$

8 Octagons

 $8 \times 8 = 64$

6 Octagons

 $6 \times 8 = 48$

3 Octagons

 $3 \times 8 = 24$

9 Octagons

 $9 \times 8 = 72$

1 Octagon

 $1 \times 8 = 8$

7 Octagons

 $7 \times 8 = 56$

Lesson 48—Rounding to Any Value

Daily Dose

Money Review: Write the value of the money shown and add.



\$25.75

\$15.45

\$41.20

Color the Answer: Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

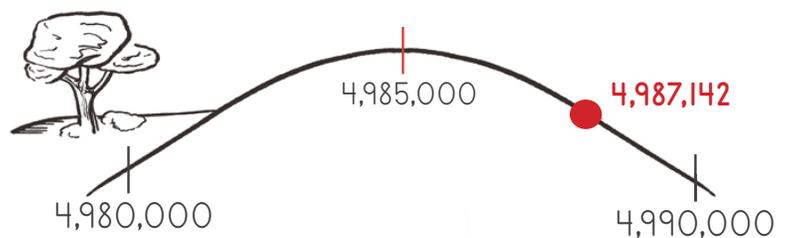
8	10	8	3	8	2	8	1
$\times 9$	$\times 8$	$\times 6$	$\times 8$	$\times 8$	$\times 8$	$\times 7$	$\times 8$
72	80	48	24	64	16	56	8

72
56
8
24
64
48
80
16

Country	Population ¹	Rounded Population
Belize	385,854	390,000
Guatemala	16,581,273	16,580,000
Honduras	9,182,766	9,180,000
El Salvador	6,187,271	6,190,000
Nicaragua	6,085,213	6,090,000
Costa Rica	4,987,142	4,990,000
Panama	3,800,644	3,800,000

Lesson Answers:

- (a) four million, nine hundred eighty-seven thousand, one hundred forty-two
- (b) See the hill image on the right.
- (c) 4,990,000 (d) 7 is greater than 5



Lesson 48—Student Worksheet

World Populations

Rounding is often used when comparing large numbers. However, the numbers that are rounded need to be rounded to the same place value to make the best comparison. On this worksheet, the populations of each continent will be compared by rounding to the nearest millions place.

In 2018, the Central Intelligence Agency (CIA) of the US reported the world populations of the continents as listed in the chart at the bottom of the page.¹ For each continent listed in the table, round the number to the millions place. Write the rounded answer in the box provided for each continent on the map. Place a star next to the continent with the largest population and underline the continent with the smallest population.

North America	579,823,762
South America	422,197,467
Africa	1,264,314,235
Europe	607,191,945
Asia	4,599,107,541
Australia (Oceania)	31,404,995

1. The World Factbook (2018 Census), Central Intelligence Agency, accessed 2019, cia.gov/library/publications/resources/the-world-factbook/index.html.

Lesson 49—Estimation

Daily Dose

Mr. Gallon Story Review: Write the equivalent amount for each measurement. Refer to the "Mr. Gallon's Farm" illustration (from the Appendix), if needed.

5 gallons = 20 quarts 8 cups = 4 pints
7 pints = 14 cups 1 gallon = 16 cups

Flower Power: Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.

My Math Journal Answers: Page 17

ESTIMATING

Estimation is making a best guess on an amount of something using all the known information.

My Estimate: will vary Actual Numbers: 23

Bonus Activity Answers:

Bonus Activity: Math Mystery

How? Solve for each shape below and find the final answers.

$\triangle + \triangle = 10$	$\triangle = 5$
$\triangle \times \star = 40$	$\star = 8$
$\star + \star - \hexagon = 9$	$\hexagon = 7$
$\hexagon - \triangle = \circ$	$\circ = 2$
$\circ \times \triangle \times \star = 80$	

Lesson Answers:

- (a) We can multiply to find out about how many. 45
 (b) 30
 (c) $9 \times 8 = 72$
 (d) $7 \times 5 = 35$
 (e) $10 \times 10 = 100$

Lesson 49—Student Worksheet

Vegetation Estimation

Look at the crops harvested by the Costa Rican farmers. We don't know exactly how many were harvested from each row, but we know the number in one basket and how many baskets were collected for each row. Use this information to write a multiplication problem and estimate the total number harvested in each row.



6 total baskets collected

$$6 \times 8 = 48 \text{ Estimate}$$



4 total baskets collected

$$4 \times 6 = 24 \text{ Estimate}$$



5 total baskets collected

$$5 \times 10 = 50 \text{ Estimate}$$



9 total baskets collected

$$9 \times 5 = 45 \text{ Estimate}$$



7 total baskets collected

$$7 \times 7 = 49 \text{ Estimate}$$



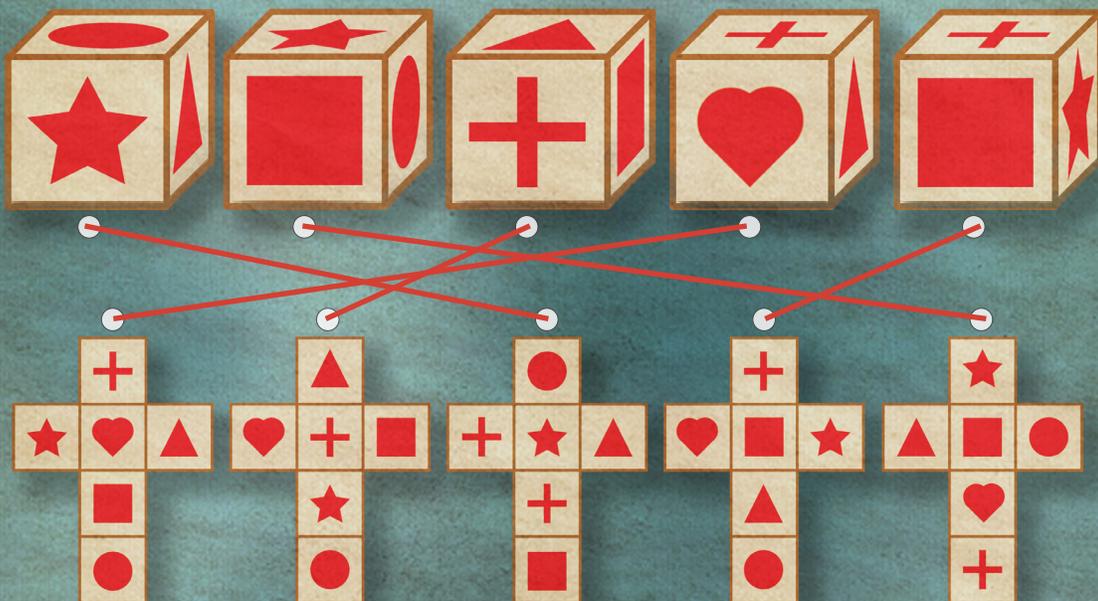
8 total baskets collected

$$8 \times 3 = 24 \text{ Estimate}$$

Lesson 50—Student Worksheet

Cube Connection

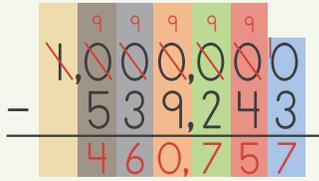
Match each cube below with the correct net (a net is what a 3D shape would look like if it were unfolded and laid flat.).
Optional extension: On your dry-erase eraser board, sketch what the two nets not chosen would look like as cubes.



Lesson 51—A World of Wonder: Fractals

Daily Dose

Find the Difference:



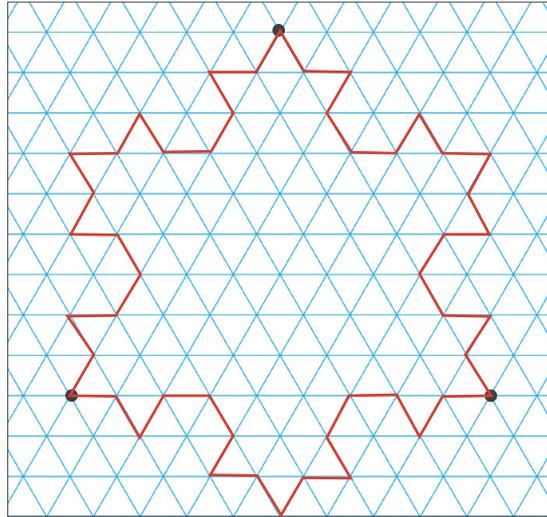
Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$8 \times \square =$ $8 \times \square =$
 $8 \times \square =$ $8 \times \square =$
 $8 \times \square =$ $8 \times \square =$
 $8 \times \square =$ $8 \times \square =$

Answers will vary.

Lesson Answers:

(a)



Lesson 51—Student Worksheet

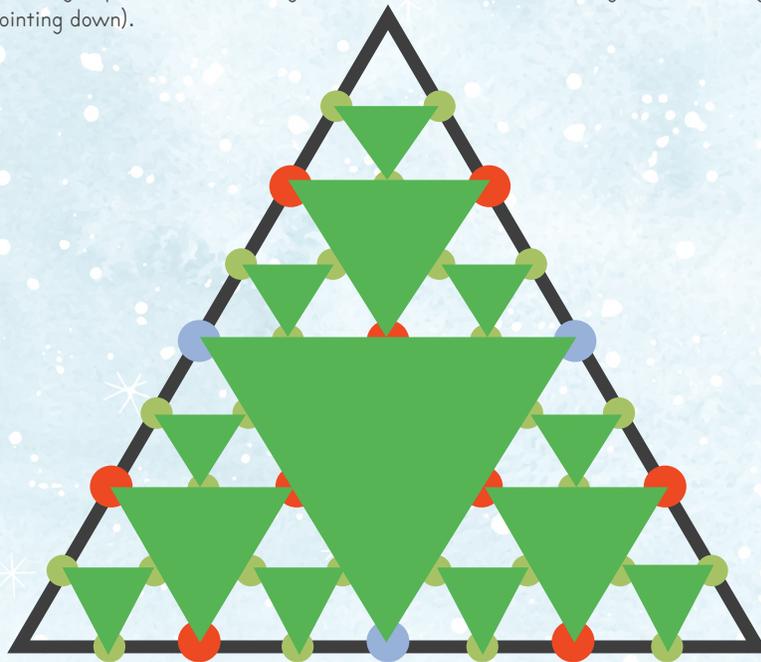
Fractal Formations



Wacław Franciszek Sierpiński
 Born: March 14, 1882
 Died: October 21, 1969

Sierpiński was a Polish mathematician known for his work in number theory, along with other contributions. There are three well-known fractals named after him. One of these fractals is known as the Sierpiński triangle. Follow the directions to create this fractal.

1. Split the triangle into four triangles by connecting the blue dots shown along the midpoint of each side. You will cross over other colored dots.
2. Color the center triangle green (the one that appears upside down).
3. Split each of the three remaining triangles by connecting the red dots shown along the midpoint of each side drawn. You will cross over other colored dots.
4. In each group of four new triangles created, color the center one green (the triangle pointing down).
5. Split each of the three remaining triangles by connecting the green dots shown along the midpoint of each side drawn.
6. In each group of four new triangles created, color the center one green (the triangle pointing down).



Lesson 52—Multiplication with Unknowns

Daily Dose

Elapsed Time: Use the elapsed time to find the start time.

Start Time:  **11:30**

Elapsed Time: 28 min.

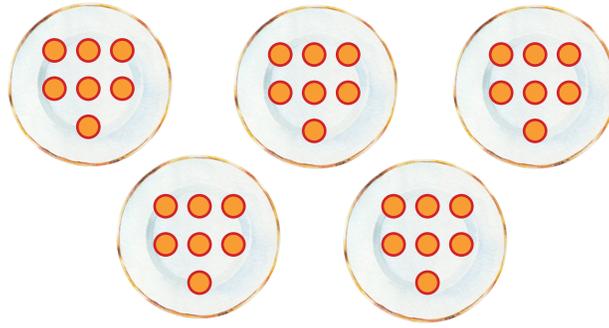
End Time:  **11:58**

Multiplication Bingo (Multiplying by 8):

Roll the ten-sided dice and place it in the empty square below. Then solve the problem and color in the product. Continue until you have four colored boxes in a row (across, down, or diagonally).

16	24	64	8
80	72	32	32
40	64	72	16
8 × <input type="text"/>	48	56	32
	48	56	56

Lesson Answers:



(a) 7 (b) 5 (c)  = 6

 = 3

 = 8

 = 3

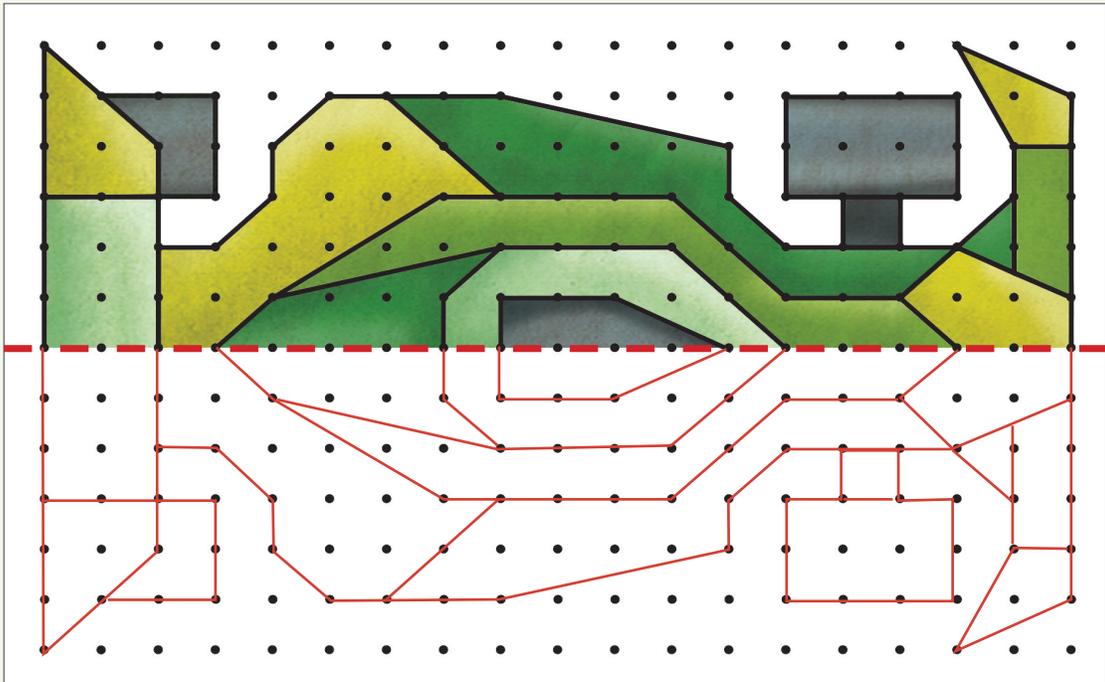
Lesson 52—Bonus Activity

Independent Activities

Student Worksheet: Nature Walk

Bonus Activity: Dot Board Symmetry #3

How? Using the dots as your guide, complete the other side of the image. Make sure the image shows symmetry. The red dashed line represents the line of symmetry.



Lesson 52—Student Worksheet

Nature Walk

Can you find the missing factor in these multiplication word problems, either mentally or by drawing tally marks? In the space provided, write the number that each object represents.

Two children found 16 acorns on their walk. They shared them equally. How many acorns did each child get?

$$2 \times \text{acorn} = 16 \text{ acorns} \quad \text{acorn} = 8$$

Eight children found 24 pine cones on their walk. They shared them equally. How many pine cones did each child get?

$$8 \times \text{pine cone} = 24 \text{ pine cones} \quad \text{pine cone} = 3$$

Four children found 32 twigs on their walk. They shared them equally. How many twigs did each child get?

$$4 \times \text{twig} = 32 \text{ twigs} \quad \text{twig} = 8$$

Leroy brought home 35 leaves. He wanted to share them with his family. There are 7 members in his family, including himself. How many leaves will each family member receive?

$$7 \times \text{leaf} = 35 \text{ leaves} \quad \text{leaf} = 5$$

The second factor in each of the equations below is missing. Write the number that each object represents in the area provided. Tally marks may be drawn as needed.

$$3 \times \text{pumpkin} = 18 \text{ pumpkins} \quad \text{pumpkin} = 6$$

$$9 \times \text{leaf} = 36 \text{ leaves} \quad \text{leaf} = 4$$

$$6 \times \text{pine cone} = 42 \text{ pine cones} \quad \text{pine cone} = 7$$

$$8 \times \text{mushroom} = 40 \text{ mushrooms} \quad \text{mushroom} = 5$$

$$5 \times \text{leaf} = 25 \text{ leaves} \quad \text{leaf} = 5$$

$$7 \times \text{acorn} = 56 \text{ acorns} \quad \text{acorn} = 8$$

$$7 \times \text{stick} = 28 \text{ sticks} \quad \text{stick} = 4$$

$$5 \times \text{apple} = 45 \text{ apples} \quad \text{apple} = 9$$

Lesson 53—Multiplying by 9

Daily Dose

Round to the Nearest Dollar:

$$\$4.21 \quad \boxed{\$4.00} \quad \$15.63 \quad \boxed{\$16.00}$$

$$\$9.50 \quad \boxed{\$10.00} \quad \$7.03 \quad \boxed{\$7.00}$$

Mental Math Review: Choose any mental math strategy to add the numbers below.

$$\begin{array}{r} 76 \\ + 21 \\ \hline 97 \end{array} \quad \begin{array}{r} 48 \\ + 33 \\ \hline 81 \end{array}$$

Missing Factor: Fill in the missing factors.

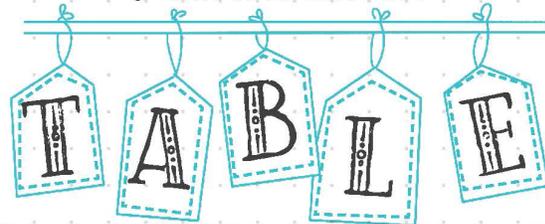
$$\begin{array}{cccccc} 8 & 8 & 8 & 8 & 8 & 8 \\ \times \boxed{7} & \times \boxed{3} & \times \boxed{10} & \times \boxed{4} & \times \boxed{2} & \times \boxed{6} \\ \hline 56 & 24 & 80 & 32 & 16 & 48 \end{array}$$

Lesson Answers:

- (a) 10 (b) 18 (c) $2 \times 9 = 18$
 (d) 27 tamales (e) $3 \times 9 = 27$
 (f) $4 \times 9 = 36$; $5 \times 9 = 45$; $6 \times 9 = 54$;
 $7 \times 9 = 63$; $8 \times 9 = 72$; $9 \times 9 = 81$;
 $10 \times 9 = 90$

My Math Journal Answers: Page 31

MULTIPLICATION



x	1	2	3	4	5	6	7	8	9	10	11	12
1									9			
2									18			
3									27			
4									36			
5									45			
6									54			
7									63			
8									72			
9									81			
10									90			
11									99			
12									108			

Lesson 53—Student Worksheet

Masa Multiplication



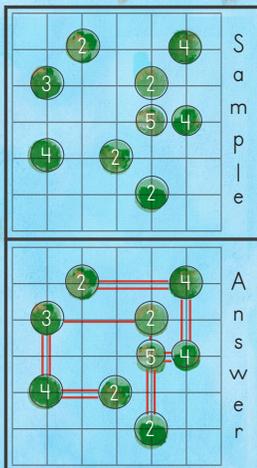
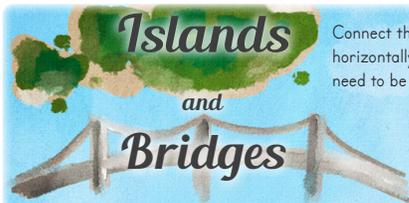
Navidad (Christmas) is less than two weeks away. Raúl's family must gather all the ingredients for the Tamalada, or tamale-making party. One of the ingredients needed is masa, a dough made from corn flour. Each day leading up to Tamalada, Raúl and his family grind corn into flour for the masa.

Using a ten-sided dice, roll to find the number of baskets of corn Raúl's family grinds each day. Place the dice in the first square shown below, and then multiply by the number of ears of corn shown in the basket (9). Write the first product in the box marked as the 13th on the calendar. Roll the dice again—once for each date (14th–22nd)—and write each product in the applicable box on the calendar until you reach Tamalada.

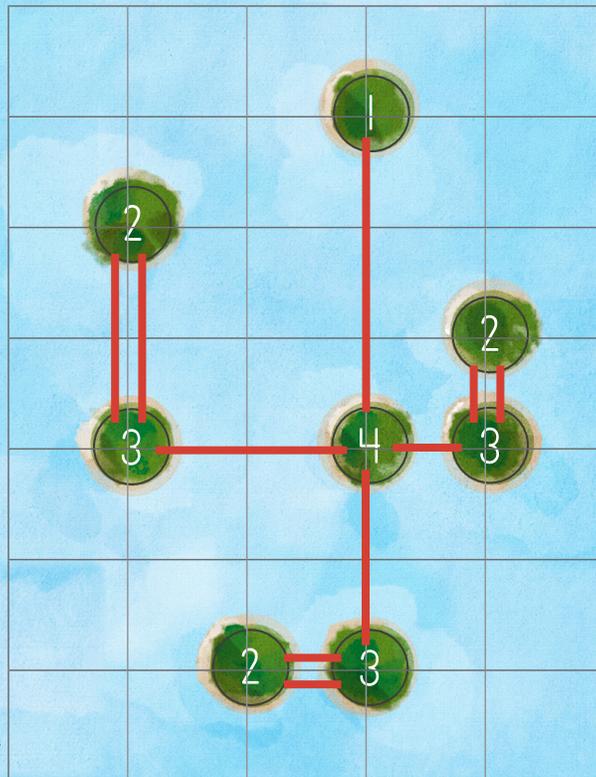


Answers will vary.

Lesson 53—Bonus Activity



Connect the islands together with the number of bridges indicated on each island. Bridges can only be drawn horizontally and vertically and cannot cross. Up to two bridges can connect any two islands, and all the islands need to be connected together. See the sample to the left to see how to solve this type of puzzle.



Hints: The "1" circle can only connect with one other circle. Is there more than one possibility for that?

Each "2" circle can have either one line to each of two other circles or two lines to one other circle.

Each "3" circle can either have lines drawn in three directions or two lines in one direction and one line in another.

Lesson 54—Multiplying by 9 Patterns

Daily Dose

Rounding: Round each number as instructed.

	Nearest Ten	Nearest Hundred	Nearest Thousand
21,980	21,980	22,000	22,000
567,210	567,210	567,200	567,000
988,821	988,820	988,800	989,000

Color the Answer:

Solve each multiplication problem and find the answer in the circles below. Color the corresponding circle with the same color as the multiplication problem.

8	10	9	4	1	3	9	2
$\times 9$	$\times 9$	$\times 7$	$\times 9$	$\times 9$	$\times 9$	$\times 6$	$\times 9$
<hr/>							
72	90	63	36	9	27	54	18

54	63	72	90	27	9	18	36
----	----	----	----	----	---	----	----

Lesson Answers:

(a) 7 (b) 70 (c) 63 (d)

$$5 \times 10 = 50 - 5 = 45$$

$$5 \times 9 = 45$$

$$9 \times 10 = 90 - 9 = 81$$

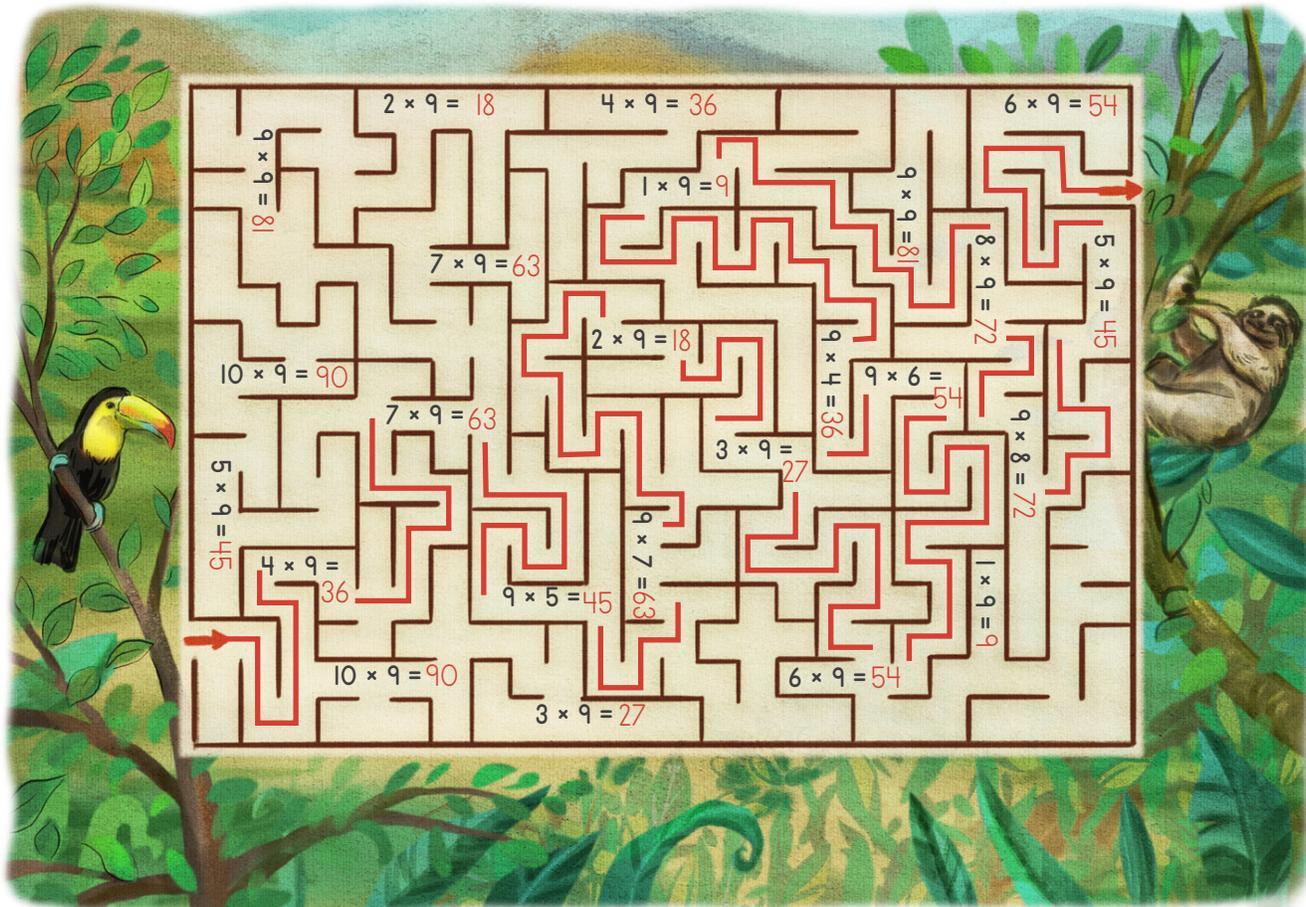
$$9 \times 9 = 81$$

(e) 9 (f) 9 (g) 9 (h) 72, 27 (i) 36, 45, 54, 63, 72, 81

Lesson 54—Student Worksheet

Rainforest Maze

Travel through the rainforest of Costa Rica by finding a path through the maze. Each time you come to a multiplication problem, use any strategy to find the product before continuing forward. *Note:* Not all multiplication problems in the maze will be solved as you complete the maze. After the maze is completed, solve any remaining problems.



Lesson 54—Bonus Activity

Today is Raúl's 10th birthday! He is measuring himself on the measuring stick in his room. How many centimeters tall is he? Place a mark on the measuring stick to indicate his height, and then write that measurement in the empty space on the table below.

Raúl's Growth Chart

Age (years)	Length (cm)
newborn	51
1	72
2	84
3	93
4	99
5	104
6	110
7	116
8	122
9	130
10	135

This chart shows how tall Raúl was on each of his birthdays. His birth length is already charted on the graph. Complete the rest of the graph by placing a dot at each height. Connect the dots to make a line graph.

Raúl's Growth Chart

Between what two ages did Raúl grow the most? Least?

Optional Challenge: Do you have any of your measurements? Ask a parent to help you make your own growth chart to see how you have grown. How tall are you today?

Answers will vary.

Lesson 55—Order of Operations

Daily Dose

Find the Sums:

$$\begin{array}{r} 863,409 \\ + 136,591 \\ \hline 1,000,000 \end{array}$$

$$\begin{array}{r} 599,375 \\ + 76,709 \\ \hline 676,084 \end{array}$$

Flower Power:

Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.

My Math Journal Answers: Page 41

Perry exercises my dogs and squirrels.

parentheses, exponents, multiplication, addition, division, subtraction

Bonus Activity Answers:

6	2	8	9	3	7	5	4	1
9	3	5	1	4	6	2	8	7
1	4	7	5	2	8	9	6	3
3	1	4	2	8	5	7	9	6
7	8	9	6	1	3	4	2	5
2	5	6	4	7	9	1	3	8
5	6	1	3	9	4	8	7	2
8	9	3	7	5	2	6	1	4
4	7	2	8	6	1	3	5	9

Lesson Answers:

(a) multiplication

(b) 4×5 $8 \oplus 2$ $78 \ominus 43$

(c) 20 (d) 30 (e) no (f) 18 (g) 36, 40 (h) 18 (i) 14, 13

Perry's Operations

Fill in the blanks under the picture to write the order of operations. To solve the problems on the left, roll the six-sided dice to determine a number to put into each box. Solve each problem using the correct order of operations.



$$(4 + \square) \times 3 = \underline{\quad}$$

$$8 + 2 \times \square = \underline{\quad}$$

$$\square \times 2 = \underline{\quad}$$

$$\square \times (2 + 3) = \underline{\quad}$$

$$(15 - 11) \times \square = \underline{\quad}$$

$$4 \times 9 + \square = \underline{\quad}$$

$$\square \times 4 - 3 = \underline{\quad}$$

$$7 \times (6 - \square) = \underline{\quad}$$

Answers will vary.



Parentheses, Exponents, Multiplication, Addition,
Division, Subtraction

Lesson 56—Order of Operations: Practice #1

Daily Dose

Measurement: Write the equivalent for each length.

Imperial System:

$$1 \text{ ft} = \boxed{12} \text{ in.} \quad 1 \text{ yd} = \boxed{3} \text{ ft}$$

Metric System:

$$30 \text{ mm} = \boxed{3} \text{ cm} \quad 50 \text{ mm} = \boxed{5} \text{ cm}$$

$$80 \text{ mm} = \boxed{8} \text{ cm} \quad 100 \text{ cm} = \boxed{1} \text{ m}$$

Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

$$9 \times \square = \quad \quad 9 \times \boxed{\square} = \quad$$

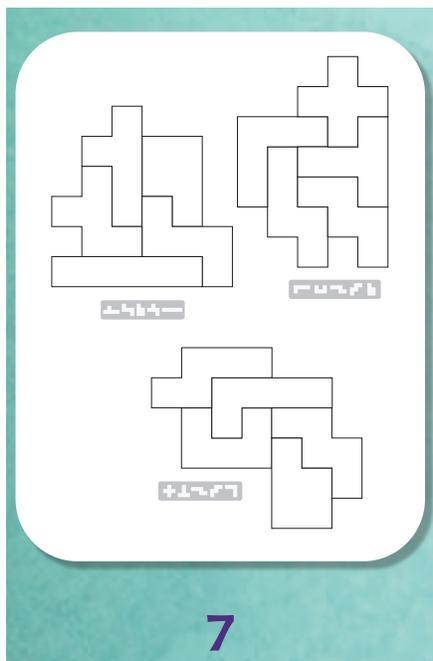
$$9 \times \square = \quad \quad \boxed{\square} \times \square = \quad$$

$$9 \times \square = \quad \quad 9 \times \square = \quad$$

$$9 \boxed{\square} = \quad \quad 9 \times \square = \quad$$

Answers will vary.

Bonus Activity Answers:



Lesson Answers:

- (a) Perry exercises my dogs and squirrels. (b) parentheses, exponents, multiplication/division, addition/subtraction (c) 36 (d) 26 (e) $2 + 4 \times 6 = 26$ should be circled (f) 21, 36, 51, 35

Lesson 56—Student Worksheet



Which Comes First?

Circle the part of the problem that should be solved first and underline the part that should be solved second. Then solve the problem. *Note: Some problems will have more than two parts.*

$8 - \underline{2 \times 4} = \underline{0}$ $\underline{10 - 2} + 5 = \underline{13}$ $\underline{(4 + 2)} \times 7 - 3 = \underline{39}$ $\underline{2 \times 3} + 8 - 3 = \underline{11}$
 $\underline{(4 + 3)} \times 6 = \underline{42}$ $\underline{3 + 3} - 4 + 8 = \underline{10}$ $\underline{(12 - 4)} \times \underline{(5 + 3)} = \underline{64}$ $8 \times \underline{(5 + 2)} = \underline{56}$

Review:

Round to the nearest 10,000:

58,391 60,000

92,987 90,000

563,409 560,000

749,863 750,000

Fill in the missing factors:

6 × 7 = 42

4 × 8 = 32

5 × 5 = 25

8 × 8 = 64



Lesson 57—Metric System: mL and L

Daily Dose

Measurement: Write the equivalent amount for each.

3 gal. = 24 pt. 5 qt. = 20 c

Rounding: Round to the nearest dollar.

\$39.52 \$40.00 \$3.49 \$3.00

Multiplication Bingo (Multiplying by 9):

Roll the ten-sided dice and place the dice in the empty square below. Then solve the problem and color in the product. Continue until you have four colored boxes in a row (across, down, or diagonally).

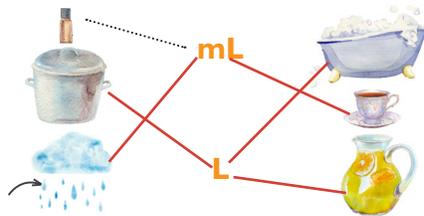
90	27	81	36
18	54	<u>81</u>	81
<u>45</u>	72	45	18
36	63	27	63

9 × =

Lesson Answers:

- (a) millimeters, centimeters, meters (b) inches, feet, yards
 (c) cups, pints, quarts, gallons

(d)



- (e) a spoonful of medicine
 a large can of paint
 a small cup of juice

- 15 mL 15 L
12 mL 12 L
125 mL 125 L

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Volume



20 drops

1 mL



1 L

1,000 mL = 1 L

Metric Volume

Circle the letter that best represents the volume. Hint: it might help to cross out all the answers that you know it could not be.

 <p>Bathtub of Water</p> <p><input checked="" type="radio"/> A. 300 L <input type="radio"/> C. 3 L</p> <p><input type="radio"/> B. 800 mL <input type="radio"/> D. 750 mL</p>	 <p>Dropper of Medicine</p> <p><input type="radio"/> A. 1 L <input type="radio"/> C. 75 L</p> <p><input type="radio"/> B. 50 mL <input checked="" type="radio"/> D. 1 mL</p>	 <p>Pitcher of Water</p> <p><input checked="" type="radio"/> A. 1 L <input type="radio"/> C. 20 L</p> <p><input type="radio"/> B. 100 mL <input type="radio"/> D. 5 mL</p>
 <p>Bottle of Soda</p> <p><input checked="" type="radio"/> A. 500 mL <input type="radio"/> C. 10 L</p> <p><input type="radio"/> B. 1 mL <input type="radio"/> D. 50 mL</p>	 <p>Bottle of Perfume</p> <p><input type="radio"/> A. 5 L <input type="radio"/> C. 25 L</p> <p><input checked="" type="radio"/> B. 100 mL <input type="radio"/> D. 7 mL</p>	 <p>Bucketful of Sand</p> <p><input type="radio"/> A. 1,000 L <input checked="" type="radio"/> C. 2 L</p> <p><input type="radio"/> B. 5 mL <input type="radio"/> D. 500 mL</p>
 <p>Cup of Cocoa</p> <p><input type="radio"/> A. 1 L <input type="radio"/> C. 200 L</p> <p><input checked="" type="radio"/> B. 120 mL <input type="radio"/> D. 2 mL</p>	 <p>Spoonful of Sugar</p> <p><input type="radio"/> A. 9 L <input type="radio"/> C. 1 L</p> <p><input type="radio"/> B. 850 mL <input checked="" type="radio"/> D. 4 mL</p>	 <p>Wheelbarrow of Dirt</p> <p><input checked="" type="radio"/> A. 170 L <input type="radio"/> C. 2 L</p> <p><input type="radio"/> B. 500 mL <input type="radio"/> D. 1,000 mL</p>

Lesson 58—More Metric System: mL and L

Daily Dose

Measurement: Convert each volume measurement.

4,000 mL = L 8,000 mL = L

3,000 mL = L 9,000 mL = L

Find the difference:

$$\begin{array}{r} 3910 \\ 401133 \\ - 298,563 \\ \hline 102,570 \end{array}$$

Multiply:

5 × 9 = 45 1 × 9 = 9 3 × 9 = 27
8 × 9 = 72 7 × 9 = 63 6 × 9 = 54

Lesson Answers:

(a) liters (b) 1,000 mL (c) 6 L (d) 6,000 mL (e) 7,000 mL, 5,000 mL, 6,000 mL (f) 2 L (g) 5 L (h) 7 L (i) 8 L, 4 L, 9 L

Student Worksheet Answers:

Water Bottle Conversions

Converting Milliliters to Liters

Each water jug below is filled with a different volume of water. Find the volume of water in each jug by reading the line that measures mL where the water level is indicated. Then convert the milliliter measurement to liters and write your answer in the box provided.



Converting Liters to Milliliters

Each group of water bottles shows a different volume of water in liters. Count how many liters are shown in each group. Then convert the liter measurement to milliliters and write your answer in the box provided.



Lesson 59—Multiplying by 11

Daily Dose

Money: For each group, calculate the amount shown in dollars and cents. Then add the amounts to find the total.

\$45.75

\$6.33

\$52.08

Missing Factor: Fill in the missing factors.

$\frac{9}{\times 8} = 72$
 $\frac{9}{\times 2} = 18$
 $\frac{9}{\times 4} = 36$
 $\frac{9}{\times 6} = 54$
 $\frac{9}{\times 7} = 63$
 $\frac{9}{\times 5} = 45$

Lesson Answers:

(a) multiply 2×11 (b) 9×11 (c)

(d)

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

$\begin{array}{r} 11 \\ +11 \\ \hline 22 \end{array}$ $11 \times 2 = 22$

$\begin{array}{r} 11 \\ +11 \\ \hline 33 \end{array}$ $11 \times 3 = 33$

$\begin{array}{r} 11 \\ +11 \\ \hline 44 \end{array}$ $11 \times 4 = 44$

$\begin{array}{r} 11 \\ +11 \\ \hline 55 \end{array}$ $11 \times 5 = 55$

$\begin{array}{r} 11 \\ +11 \\ \hline 66 \end{array}$ $11 \times 6 = 66$

$\begin{array}{r} 11 \\ +11 \\ \hline 77 \end{array}$ $11 \times 7 = 77$

$\begin{array}{r} 11 \\ +11 \\ \hline 88 \end{array}$ $11 \times 8 = 88$

$\begin{array}{r} 11 \\ +11 \\ \hline 99 \end{array}$ $11 \times 9 = 99$

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2	3	4	5	6	7	8	9	10	11	12
									11	
									22	
									33	
									44	
									55	
									66	
									77	
									88	
									99	
									110	
									121	
									132	

Lesson 59—Student Worksheet

Pass the Ball

Crumple a one-inch scratch of paper into a soccer ball. Hold it about three inches over the soccer field and drop it. The player closest to the ball takes possession and scores. Use that number to practice your 11s facts. For example, if the ball lands closest to player 1, write "1 x 11 = 11" in the team box. Play until each team scores five times. Then add each team's answers to find the total scores.

Red Team

$\square \times 11 = \square$

Blue Team

$\square \times 11 = \square$

Answers will vary.

Final Score

Lesson 59—Bonus Activity

How Many Blocks Tall
Is Each Child's Tower?

The following children were building towers. Use the clues listed below to identify how many blocks each child had in his or her tower. Draw the correct number of blocks above the child.

Ruby's tower is the shortest.
Kent's tower is two times as tall as Seth's.
Ruby's tower is the only tower that has an odd number of blocks.
Ella's tower is 3 more than Ruby's but 4 less than Kent's.

Lesson 60—Order of Operations: Practice #2

Daily Dose

Rounding: Round each number as instructed.

	Nearest Ten	Nearest Hundred	Nearest Thousand
95,321	95,320	95,300	95,000
162,786	162,790	162,800	163,000
52,456	52,460	52,500	52,000

Flower Power:
Multiply the number shown in the center of the flower by the number shown on each small petal. Write the product for each multiplication problem on the corresponding large petal. One petal is already done for you.

Bonus Activity Answers:

SHIKAKU PUZZLE #2

		4				
						8
					3	
5	9			3		
6					6	
						5

Lesson Answers:

(a) Perry exercises my dogs and squirrels. (b) order of operations (c) to know in what order we should perform mathematical operations (d) 40, 1, 42, 15

In the Science Lab with Numbers

How many milliliters are in 1 liter? 1,000



4 L = 4,000 mL

3 L = 3,000 mL

2 L = 2,000 mL

10 L = 10,000 mL

Subtraction Review

$\begin{array}{r} 5,732 \\ -2,561 \\ \hline 3,171 \end{array}$	$\begin{array}{r} 34,095 \\ -25,647 \\ \hline 8,448 \end{array}$
$\begin{array}{r} 9,004 \\ -6,385 \\ \hline 2,619 \end{array}$	$\begin{array}{r} 43.56 \\ -18.79 \\ \hline 24.77 \end{array}$

Reading Numbers in the Billions

Here is a number in expanded form:
 $6,000,000,000 + 500,000,000 + 20,000,000 + 9,000,000 + 400,000 + 60,000 + 8,000 + 100 + 70 + 8$

Write it in standard form. Don't forget commas.

6,529,468,178

Now write it in word form. Remember, you still need commas.

six billion, five hundred twenty-nine million, four hundred sixty-eight thousand, one hundred seventy-eight

Round the price of each item to the nearest dollar.



\$ 21.00



\$ 4.00



\$ 9.00



\$ 20.00

Lesson 61—Estimation and Money

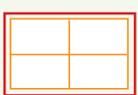
Daily Dose

Fraction Practice: Circle each shape that is divided into thirds. Put a box around each shape that is divided into fourths. Color in each shape that is divided into fifths.









Roll the Dice: For each problem, roll the ten-sided dice and write that number in the box. Then solve the problem.

× =	× =
× =	× =
× =	× =
× =	× =

Answers will vary.

Shopping List #2

Item	Price	
	\$ 3.13	\$4
	\$ 2.04	\$3
	\$ 1.72	\$2
	\$ 2.89	\$3
	\$	

Estimated Total: \$12

Shopping List #3

Item	Price	
	\$ 2.04	\$3
	\$ 1.24	\$2
	\$ 2.89	\$3
	\$ 0.68	\$1
	\$ 4.56	\$5

Estimated Total: \$14

My Math Journal Answers: Page 17

ESTIMATING



Estimation is making a best guess on an amount of something using all the known information.

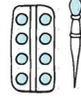
My Estimate: will vary

Actual Number: 23

\$3.74

\$2.34

\$5.00





My estimate for all three items: will vary Actual amount for all three: \$12.07

Lesson Answers:

(a) \$2.00 (b) \$4.00 (c) \$6.00 (d) bananas, peas, and tomatoes (e) \$2 (f) peas: \$1.00, tomatoes: \$5.00 (g) 8 (h) See the shopping lists on the right.

Lesson 61—Student Worksheet

The dollar amount written on the wallet is how much money you have to spend for your groceries. Look at the sale ad and write the next whole dollar amount for each item on the grocery lists. Then add the estimated prices on each shopping list. Will you have enough money to buy the items on each list? If you do not have enough money, then cross out that list.

Rounding at the Market

\$10

Lettuce	\$ 2.00
Chicken	\$ 7.00
Carrots	\$ 3.00
Estimated Total	\$ 12.00

\$5

Pasta	\$ 2.00
Sugar	\$ 4.00
Jam	\$ 2.00
Estimated Total	\$ 8.00

TWO-DAY SALE

GOING ON NOW!

\$9

Jam	\$ 2.00
Bread	\$ 3.00
Chips	\$ 2.00
Soup	\$ 1.00
Estimated Total	\$ 8.00

\$21

Chicken	\$ 7.00
Milk	\$ 4.00
Butter	\$ 3.00
Pizza	\$ 6.00
Bread	\$ 3.00
Soup	\$ 1.00
Estimated Total	\$ 24.00

Lesson 62—Section Review

Daily Dose

Measurement: Think about the volume measured by a milliliter and a liter. Then circle the measurement that best represents the volume.

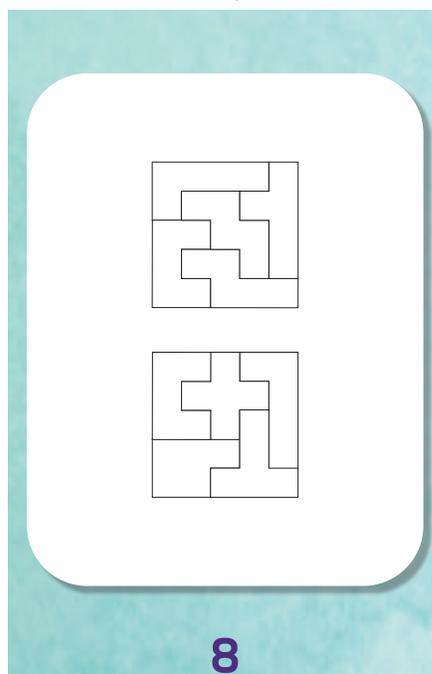
- A bucket full of water: 4 mL or 4 L
- A small bottle of honey: 450 mL or 450 L
- A large tea kettle of water: 2 mL or 2 L
- A baby bottle with milk: 200 mL or 200 L

Target Practice:

Each outer circle is obtained by multiplying the number in the inner circle with the number in the adjacent part of the white circle. Fill in the blank spaces with the correct answers.



Bonus Activity Answers:



Lesson Answers:

- (a) the number of groups and the number in each group (b) the answer or the total number
(c) milliliters (d) 1,000 mL (e) 1 L

Lesson 62—Student Worksheet

REPTILE RIDDLE

Solve each addition and subtraction problem shown below. Then round each answer to the nearest millions place and write it in the white box provided. Match the rounded answer with the blank spaces at the bottom of the page. Write the letter for each matched answer to solve the riddle.

$$\begin{array}{r} 840,683,149 \\ + 290,501,144 \\ \hline 1,131,184,293 \end{array}$$

1,131,000,000 | k

$$\begin{array}{r} 354,995,510 \\ - 300,937,486 \\ \hline 54,058,024 \end{array}$$

54,000,000 | s

$$\begin{array}{r} 239,531,993 \\ + 264,038,154 \\ \hline 503,570,147 \end{array}$$

504,000,000 | l

$$\begin{array}{r} 990,968,979 \\ - 964,123,987 \\ \hline 26,844,992 \end{array}$$

27,000,000 | i

$$\begin{array}{r} 834,285,049 \\ + 702,601,027 \\ \hline 1,536,886,076 \end{array}$$

1,537,000,000 | a

$$\begin{array}{r} 186,627,943 \\ - 42,957,271 \\ \hline 143,670,672 \end{array}$$

144,000,000 | z

One reptile native to Costa Rica is able to run on water without sinking. This reptile is called the...

b a s i l i s k

1,537,000,000 54,000,000 27,000,000 504,000,000 27,000,000 54,000,000 1,131,000,000

l i z a r d

504,000,000 27,000,000 144,000,000 1,537,000,000



Lesson 63—Section Assessment

Daily Dose

Measurement: Convert each volume measurement.

6 L = 6,000 mL | 2 L = 2,000 mL

7 L = 7,000 mL | 5 L = 5,000 mL

Multiplication Mix Up: Fill in the multiplication chart with the product for each multiplication fact.

×	8	9	4	7
6	48	54	24	42
8	64	72	32	56
11	88	99	44	77
5	40	45	20	35

Independent Assessment

1. Find the product. 10 points possible

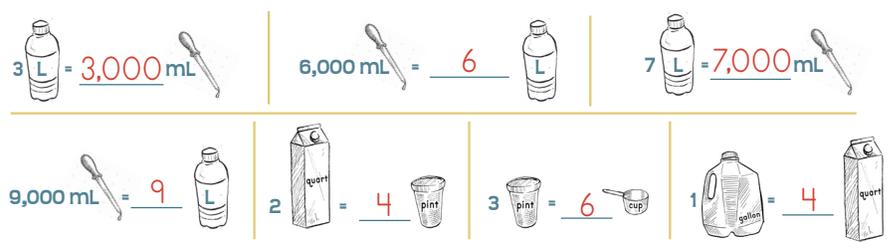
$3 \times 7 = 21$ $4 \times 7 = 28$ $4 \times 6 = 24$ $8 \times 4 = 32$ $5 \times 7 = 35$

$5 \times 9 = 45$ $3 \times 4 = 12$ $3 \times 9 = 27$ $3 \times 8 = 24$ $6 \times 3 = 18$

2. Fill in the blank showing each equivalent conversion. 7 points possible

3 L = 3,000 mL 6,000 mL = 6 L 7 L = 7,000 mL

9,000 mL = 9 L 2 quart = 4 pint 3 pint = 6 cup 1 gallon = 4 quart



3. Find the sum or difference. 8 points possible; 2 points per problem

$$\begin{array}{r} 528,679 \\ + 371,538 \\ \hline 900,217 \end{array}$$

$$\begin{array}{r} 42,789 \\ + 6,396 \\ \hline 49,185 \end{array}$$

$$\begin{array}{r} 6,430 \\ - 3,947 \\ \hline 2,483 \end{array}$$

$$\begin{array}{r} 1,000,000 \\ - 509,215 \\ \hline 490,785 \end{array}$$


Lesson Answers:

Guided Assessment:

1) ~~2,679,325,317~~

2) $56,702 = 60,000$

$213,798 = 200,000$

$3,890,120 = 4,000,000$

$\$42.91 = \43.00

3) $4 \times 3 = 12$