

MATH

LESSONS
FOR A
LIVING
EDUCATION
level 2



**Angela O'Dell
& Kyrsten Carlson**

First printing: March 2016

Copyright © 2016 by Angela O'Dell and Kyrsten Carlson. All rights reserved. No part of this book may be used or reproduced in any manner whatsoever without written permission of the publisher, except in the case of brief quotations in articles and reviews. For information write:

Master Books®, P.O. Box 726, Green Forest, AR 72638

Master Books® is a division of the New Leaf Publishing Group, Inc.

ISBN: 978-0-89051-924-0

Unless otherwise noted, Scripture quotations are from the New King James Version of the Bible.

Printed in the United States of America

Please visit our website for other great titles: www.masterbooks.com

For information regarding author interviews, please contact the publicity department at (870) 438-5288

Dedication

To all the little children, whom He Loves.



Scope and Sequence

Using This Course.....	4
Schedule	8
Lesson 1: Place Value Village, Telling Time, Shapes and Patterns.....	15
Lesson 2: Addition — Horizontal and Vertical Shapes.....	27
Lesson 3: Subtraction	37
Lesson 4: Writing Numbers to 100, Simple Fractions.....	45
Lesson 5: Introducing Word Problems	53
Lesson 6: Skip Counting by Using Dimes and Nickels, Minutes on the Clock	63
Lesson 7: Skip Counting by 2, Review Even and Odd Numbers.....	71
Lesson 8: Addition — Double Digit Plus Single Digit	79
Lesson 9: Addition — Double Digit Plus Double Digit.....	87
Lesson 10: Addition Review — All Concepts Learned.....	95
Lesson 11: Introducing Measurement — Inches/Feet, Review Time and Shapes.....	103
Lesson 12: Introducing Perimeter	111
Lesson 13: Telling Time to the Minute.....	125
Lesson 14: Place Value Village Practice — Place Value to the Thousands' Place	133
Lesson 15: More Work with Subtraction	145
Lesson 16: Introducing Addition with Carrying to the Tens' Place	157
Lesson 17: Introducing Subtraction with Borrowing from the Tens' Place	167
Lesson 18: Review of Regrouping Concepts	175
Lesson 19: Understanding Dollars and Cents — Writing Money Terms	183
Lesson 20: Review — Money.....	191
Lesson 21: Introducing Thermometers and Other Gauges	197
Lesson 22: Reading Bar Graphs and Line Graphs	205
Lesson 23: More on Measurement — Pounds and Ounces.....	213
Lesson 24: More Measurement Concepts — Gallons, Quarts, Pints, Cups	221
Lesson 25: Review of Measurement	241
Lesson 26: Adding Money — No Regrouping	249
Lesson 27: Subtracting Money — Making Change	259
Lesson 28: More Work with Word Problems	267
Lesson 29: More Work with Telling Time	275
Lesson 30: More Work with Measurement.....	285
Lesson 31: Review of Place Value Through the Thousands' Place.....	289
Lesson 32: Review of Word Problems — the Steps of Solving.....	297
Lesson 33: Review of Adding and Subtracting — Double Digit Problems	303
Lesson 34: Review of Money Concepts.....	309
Lesson 35: Review of Time and Temperature	317
Lesson 36: Review of Addition and Subtraction Fact Families.....	323
Manipulative Section.....	326

Using This Course

Features: The suggested weekly schedule enclosed has easy-to-manage lessons that guide the reading, worksheets, and all assessments. The pages of this course are perforated and three-hole punched so materials are easy to tear out, hand out, grade, and store. Teachers are encouraged to adjust the schedule and materials needed in order to best work within their unique educational program.

Lesson Scheduling: Students are instructed to read the pages in their book and then complete the corresponding section provided by the teacher. Assessments that may include worksheets, activities, quizzes, and tests are given at regular intervals with space to record each grade. Space is provided on the weekly schedule for assignment dates, and flexibility in scheduling is encouraged. Teachers may adapt the scheduled days per each unique student situation. As the student completes each assignment, this can be marked with an “X” in the box.



Approximately 30 minutes per lesson, five days a week, for 36 weeks



Answer keys for worksheets are available online: www.masterbooks.com/classroom-aids



Worksheets and quizzes are included for each section



Designed for grade 2 in a one-year course

Course Description

Welcome to the second book in the **Math Lessons for a Living Education** series! You will find that *Math Lessons for a Living Education* is a unique approach to learning math. A blend of stories, copy work, oral narration, and hands-on experience brings the concepts to life and invites the child to explore the world around them. The tone of this math book is meant to speak personally to each child, and the method easily adapted to any teaching style.

The first 30 lessons have a story about the twins, followed by a lesson, taught by Mom or Dad through hands-on learning. Sometimes, this lesson is learned by the twins’ explorations in nature. After the story, there is a section for students to practice the lesson they learned and to review what they have learned earlier. “Quizzes” or reviews, whichever you want to use them as, are in the form of “letters to family and friends.” The twins want to show them what they have been learning, and they need students to help them! Students show what they have learned by writing the letters for the twins. The last 6 lessons are focused reviews, covering topics learned throughout the first 30 lessons.

Course Objectives: Students completing this course will

- ✓ Review addition and subtraction, and basic numbers up to 100
- ✓ Explore new concepts like word problems, skip counting money and time
- ✓ Learn how to read bar graphs and line graphs, as well as understand basic measurement
- ✓ Identify place values, regrouping concepts, and measurement with a thermometer.

Teaching mathematics as a living subject

This book is the continuing story of Charlie and Charlotte, who are learning that life is full of learning opportunities! As you read their story, students will be drawn into the adventure along with the twins. They will learn about numbers, shapes, place value, adding, and subtracting. They will also learn about the seasons, geography, and the love of family. They will be invited to join the twins on their living math adventures. I hope you have a grand time on this adventure. Have a wonderful time exploring and learning!

As a teacher and a mother, I have discovered that true education is based on relationships: the relationship the child makes with the amazing concepts in the world around them; the relationship the teacher and the child make with each other; and most importantly and ultimately, the relationship the child makes with their Creator. It is built on discovering the God of the Universe — the One who holds the universe in His hands but at the same

time, lovingly indwells the heart of a little child. The story in Book 2 is meant to reach into a child's world, grab their attentions and invite them into the learning process. The concepts are not taught through drill only, but also through encouraging the student to hone their critical thinking skills and think outside of the box. This curriculum teaches the student math, but it is not result-oriented, focusing only on grades; instead it is skill and process-oriented. I have discovered that it is in the everyday that we grow and become who we are meant to be. It is in the little discoveries all along the path of life that we grow, learn, develop, and discover who God is and, in turn, see ourselves the way He sees us. Math concepts are learned well, as it is learned in the context of living, in the midst of discovery, and through the worldview glasses that focus on the bigger picture.

First Semester Suggested Daily Schedule

Date	Day	Assignment	Due Date	✓	Grade
First Semester-First Quarter					
Week 1	Day 1	Read Lesson 1 • Pages 15-16 Complete Lesson 1 Exercise 1 • Pages 17-18			
	Day 2	Complete Lesson 1 Exercise 2 • Pages 19-20			
	Day 3	Complete Lesson 1 Exercise 3 • Pages 21-22			
	Day 4	Complete Lesson 1 Exercise 4 • Pages 23-24			
	Day 5	Complete Lesson 1 Exercise 5 • Pages 25-26			
Week 2	Day 6	Read Lesson 2 • Pages 27-28 Complete Lesson 2 Exercise 1 • Page 29			
	Day 7	Complete Lesson 2 Exercise 2 • Pages 30-31			
	Day 8	Complete Lesson 2 Exercise 3 • Page 32			
	Day 9	Complete Lesson 2 Exercise 4 • Pages 33-34			
	Day 10	Complete Lesson 2 Exercise 5 • Pages 35-36			
Week 3	Day 11	Read Lesson 3 • Page 37 Complete Lesson 3 Exercise 1 • Pages 38-39			
	Day 12	Complete Lesson 3 Exercise 2 • Page 40			
	Day 13	Begin Lesson 3 Exercise 3-4 • Page 41			
	Day 14	Finish Lesson 3 Exercise 3-4 • Page 41			
	Day 15	Complete Lesson 3 Exercise 5 • Pages 42-44			
Week 4	Day 16	Read Lesson 4 • Page 45 Complete Lesson 4 Exercise 1 • Page 46			
	Day 17	Complete Lesson 4 Exercise 2 • Page 47			
	Day 18	Complete Lesson 4 Exercise 3 • Page 48			
	Day 19	Complete Lesson 4 Exercise 4 • Page 49			
	Day 20	Complete Lesson 4 Exercise 5 • Pages 50-52			
Week 5	Day 21	Read Lesson 5 • Page 53 Complete Lesson 5 Exercise 1 • Pages 54-56			
	Day 22	Complete Lesson 5 Exercise 2 • Page 57			
	Day 23	Complete Lesson 5 Exercise 3 • Page 58			
	Day 24	Complete Lesson 5 Exercise 4 • Pages 59-60			
	Day 25	Complete Lesson 5 Exercise 5 • Pages 61-62			
Week 6	Day 26	Read Lesson 6 • Page 63 Complete Lesson 6 Exercise 1 • Page 64			
	Day 27	Complete Lesson 6 Exercise 2 • Pages 65-66			
	Day 28	Complete Lesson 6 Exercise 3 • Page 67			
	Day 29	Complete Lesson 6 Exercise 4 • Pages 68-69			
	Day 30	Complete Lesson 6 Exercise 5 • Page 70			

Date	Day	Assignment	Due Date	✓	Grade
Week 7	Day 31	Read Lesson 7 • Page 71 Complete Lesson 7 Exercise 1 • Page 72			
	Day 32	Complete Lesson 7 Exercise 2 • Page 73			
	Day 33	Complete Lesson 7 Exercise 3 • Page 74			
	Day 34	Complete Lesson 7 Exercise 4 • Pages 75-76			
	Day 35	Complete Lesson 7 Exercise 5 • Pages 77-78			
Week 8	Day 36	Read Lesson 8 • Pages 79-80 Complete Lesson 8 Exercise 1 • Page 81			
	Day 37	Complete Lesson 8 Exercise 2 • Page 82			
	Day 38	Complete Lesson 8 Exercise 3 • Page 83			
	Day 39	Begin Lesson 8 Exercise 4-5 • Pages 84-86			
	Day 40	Finish Lesson 8 Exercise 4-5 • Pages 86-87			
Week 9	Day 41	Read Lesson 9 • Pages 87-88 Complete Lesson 9 Exercise 1 • Page 89			
	Day 42	Complete Lesson 9 Exercise 2 • Page 90			
	Day 43	Complete Lesson 9 Exercise 3 • Page 91			
	Day 44	Complete Lesson 9 Exercise 4 • Page 92			
	Day 45	Complete Lesson 9 Exercise 5 • Pages 93-94			
First Semester-Second Quarter					
Week 1	Day 46	Read Lesson 10 • Page 95 Complete Lesson 10 Exercise 1 • Page 96			
	Day 47	Complete Lesson 10 Exercise 2 • Page 97			
	Day 48	Complete Lesson 10 Exercise 3 • Page 98			
	Day 49	Complete Lesson 10 Exercise 4 • Page 99			
	Day 50	Complete Lesson 10 Exercise 5 • Pages 100-102			
Week 2	Day 51	Read Lesson 11 • Page 103 Complete Lesson 11 Exercise 1 • Page 104			
	Day 52	Complete Lesson 11 Exercise 2 • Page 105			
	Day 53	Complete Lesson 11 Exercise 3 • Page 106			
	Day 54	Complete Lesson 11 Exercise 4 • Pages 107-108			
	Day 55	Complete Lesson 11 Exercise 5 • Pages 109-110			
Week 3	Day 56	Read Lesson 12 • Pages 111-112 Complete Lesson 12 Exercise 1 • Pages 113-116			
	Day 57	Complete Lesson 12 Exercise 2 • Pages 117-118			
	Day 58	Complete Lesson 12 Exercise 3 • Page 119			
	Day 59	Complete Lesson 12 Exercise 4 • Page 120			
	Day 60	Complete Lesson 12 Exercise 5 • Pages 121-124			

Date	Day	Assignment	Due Date	✓	Grade
Week 4	Day 61	Read Lesson 13 • Pages 125-126 Complete Lesson 13 Exercise 1 • Page 127			
	Day 62	Complete Lesson 13 Exercise 2 • Page 128			
	Day 63	Complete Lesson 13 Exercise 3 • Page 129			
	Day 64	Complete Lesson 13 Exercise 4 • Page 130			
	Day 65	Complete Lesson 13 Exercise 5 • Pages 131-132			
Week 5	Day 66	Read Lesson 14 • Pages 133-136 Complete Lesson 14 Exercise 1 • Pages 137-138			
	Day 67	Complete Lesson 14 Exercise 2 • Page 139			
	Day 68	Complete Lesson 14 Exercise 3 • Page 140			
	Day 69	Complete Lesson 14 Exercise 4 • Page 141			
	Day 70	Complete Lesson 14 Exercise 5 • Pages 142-144			
Week 6	Day 71	Read Lesson 15 • Pages 145-146 Complete Lesson 15 Exercise 1 • Pages 147-148			
	Day 72	Complete Lesson 15 Exercise 2 • Page 149-150			
	Day 73	Complete Lesson 15 Exercise 3 • Pages 151-152			
	Day 74	Complete Lesson 15 Exercise 4 • Pages 153-154			
	Day 75	Complete Lesson 15 Exercise 5 • Page 155-156			
Week 7	Day 76	Read Lesson 16 • Pages 157-158 Complete Lesson 16 Exercise 1 • Page 159			
	Day 77	Complete Lesson 16 Exercise 2 • Page 160			
	Day 78	Complete Lesson 16 Exercise 3 • Page 161			
	Day 79	Complete Lesson 16 Exercise 4 • Page 162			
	Day 80	Complete Lesson 16 Exercise 5 • Pages 163-166			
Week 8	Day 81	Read Lesson 17 • Pages 167-169 Complete Lesson 17 Exercise 1 • Page 170			
	Day 82	Complete Lesson 17 Exercise 2 • Page 171			
	Day 83	Complete Lesson 17 Exercise 3 • Page 172			
	Day 84	Complete Lesson 17 Exercise 4 • Page 173			
	Day 85	Complete Lesson 17 Exercise 5 • Page 174			
Week 9	Day 86	Read Lesson 18 • Page 175 Complete Lesson 18 Exercise 1 • Pages 176-177			
	Day 87	Complete Lesson 18 Exercise 2 • Page 178			
	Day 88	Complete Lesson 18 Exercise 3 • Page 179			
	Day 89	Complete Lesson 18 Exercise 4 • Pages 180-181			
	Day 90	Complete Lesson 18 Exercise 5 • Page 182			
		Mid-Term Grade			

Place Value Village, Telling Time, Shapes and Patterns

Lesson 1



It had been a week since Charlie and Charlotte had arrived home from their grandparents' farm. They had experienced such a grand summer with Grandpa and Grandma learning about so many animals, plants, and patterns in nature on the farm. Now that they were home, they were continuing to learn a lot. First off, Mom's round tummy was growing, and they could feel their baby sister kicking from within. Just last night, Charlie had counted 20 energetic kicks, and today, at lunch, Charlotte had counted up to 50 vigorous kicks. Charlie and Charlotte simply could not wait to meet their new little sister! Grandma had explained to them about this wonderful pattern, which God designed, of babies growing securely inside a mother's body while their hearts and lungs grow stronger each day in a warm, safe environment, until they were ready to be born. Knowing God cared so much for their baby sister meant everything to Charlie and Charlotte!





Upon arriving home, Charlie and Charlotte also were excited to discover that Dad had added two new rooms onto their house to create more space

for their growing family. The addition consisted of a nursery for the new baby and a schoolroom for Charlie and Charlotte. Filled with hundreds of exciting books and an abundance of art supplies, Charlie and Charlotte could not wait for the school year to begin! Mother had told them they were to start right after Labor Day, which is the first Monday in September. Looking at the new addition, Charlie and Charlotte could not help thinking about Grandpa's Place Value Village. He had shown them the Hundreds' House, the Tens' House, and the Ones' House. Bundling carrots in bundles of 10 with Grandpa and arranging flowers with Grandma in bunches of 10 had helped them understand numbers and place value up to 100. They simply could not wait to add onto their own Place Value Village houses this year!

One more change the twins quickly noticed was that Father had constructed a sturdy-looking pen and shed for Ann and Andy, Betsy's lambs from Grandpa and Grandma's farm. Nestled snugly in the corner of the yard, in the shape of a rectangle, just like Pokey's bed (Pokey was their pet box turtle), Ann and Andy seemed to already be enjoying themselves as they danced gleefully around in their new home. Every morning at 7:30, right before breakfast, Charlie and Charlotte fed them, and Ann and Andy jumped and skipped happily about.

Although Charlie and Charlotte missed Grandpa and Grandma and the farm, they really were glad to be home. They were extremely excited for school to start, and they could not wait to discover more with Dad and Mom!

Let's begin our adventure together by reviewing counting and place value using our Place Value Village.

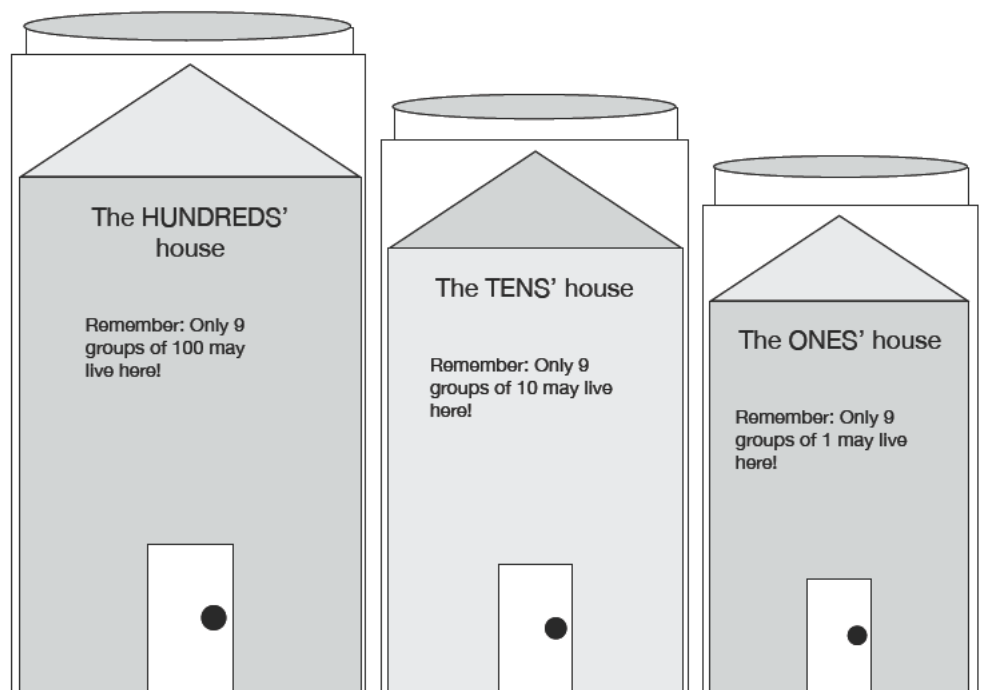
Teacher

In preparation for teaching this lesson (and any other lessons about place value), you will need to gather these items:

- At the back of this book, you will find several pages with your “Place Value Village.” Please cut out the “houses” and paste each piece on a separate piece of sturdy paper. It would be wise to laminate each “house” to make it more durable.
- For this lesson, gather three cups or containers; one smaller, shorter one (for the ONES’ house), one medium one (for the TENS’ house), and one larger one (for the HUNDREDS’ house); we will add the large THOUSANDS’ house later.
- To create your Place Value Village set, adhere your houses onto the side of the containers.
- Also have on hand numerous small items, such as dried beans (kidney beans work very well), 10 snack-size baggies and 9 one-gallon freezer bags.

For the families just starting out in this series, detailed instructions for using the Place Value Village to teach place value and counting can be located in the introduction of this book.

Count out 20 beans by using your Place Value Village. Write each number on your Place Value Mat.



Name _____

Exercise **1**

Day
1

Numbers for copywork:

0 1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

16 17 18 19 20

Name _____

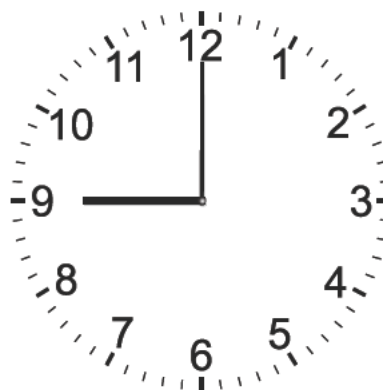
Exercise 2

Day
2

Review telling time to the hour. Remember, when the short hour hand is pointing directly at a number, and the long minute hand is pointing directly at the 12, we say it is “something o’clock.”

Like this:

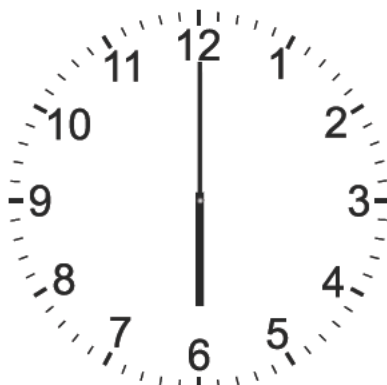
We say 9 o’clock.



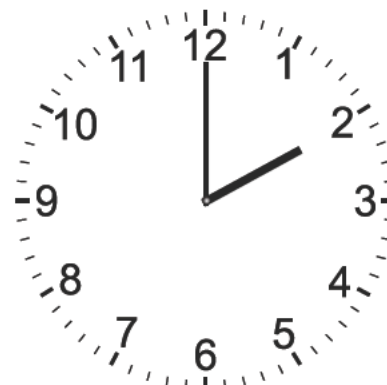
Now it’s your turn! Write the time under each clock.



_____ o’clock



_____ o’clock



_____ o’clock



_____ o’clock

Name _____

Exercise **2** Day
2

Numbers for copywork:

0 1 2 3 4 5

6 7 8 9 10

11 12 13 14 15

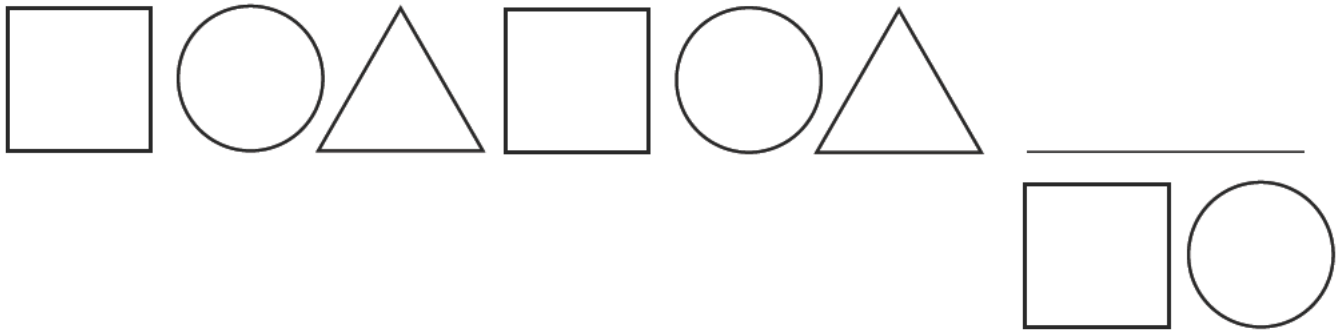
16 17 18 19 20

Name _____

Exercise 3

Day
3

Review patterns and shapes. Patterns and shapes are all around us! What comes next in these patterns? Circle the correct shape to complete the pattern.



The patterns above are made of shapes. What shapes are they?

Tell your teacher what makes a triangle and then draw one here:

Tell your teacher what makes a square and then draw one here:

Name _____

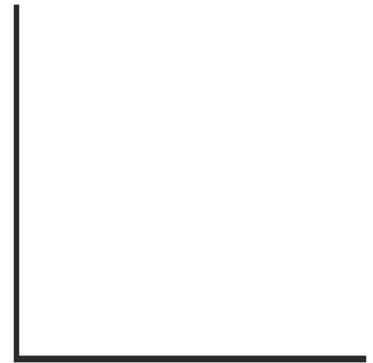
Exercise 3

Day
3

Tell your teacher what makes a circle and then draw one here:

Tell your teacher what makes a rectangle and then draw one here:

If both squares and rectangles have four corners, like this:
and four sides that are straight, what is the difference
between them?



Name _____

Exercise 4

Day
4

Practice counting items up to 40 using your Place Value Village.

Numbers for copywork:

21 22 23 24 25

26 27 28 29 30

31 32 33 34 35

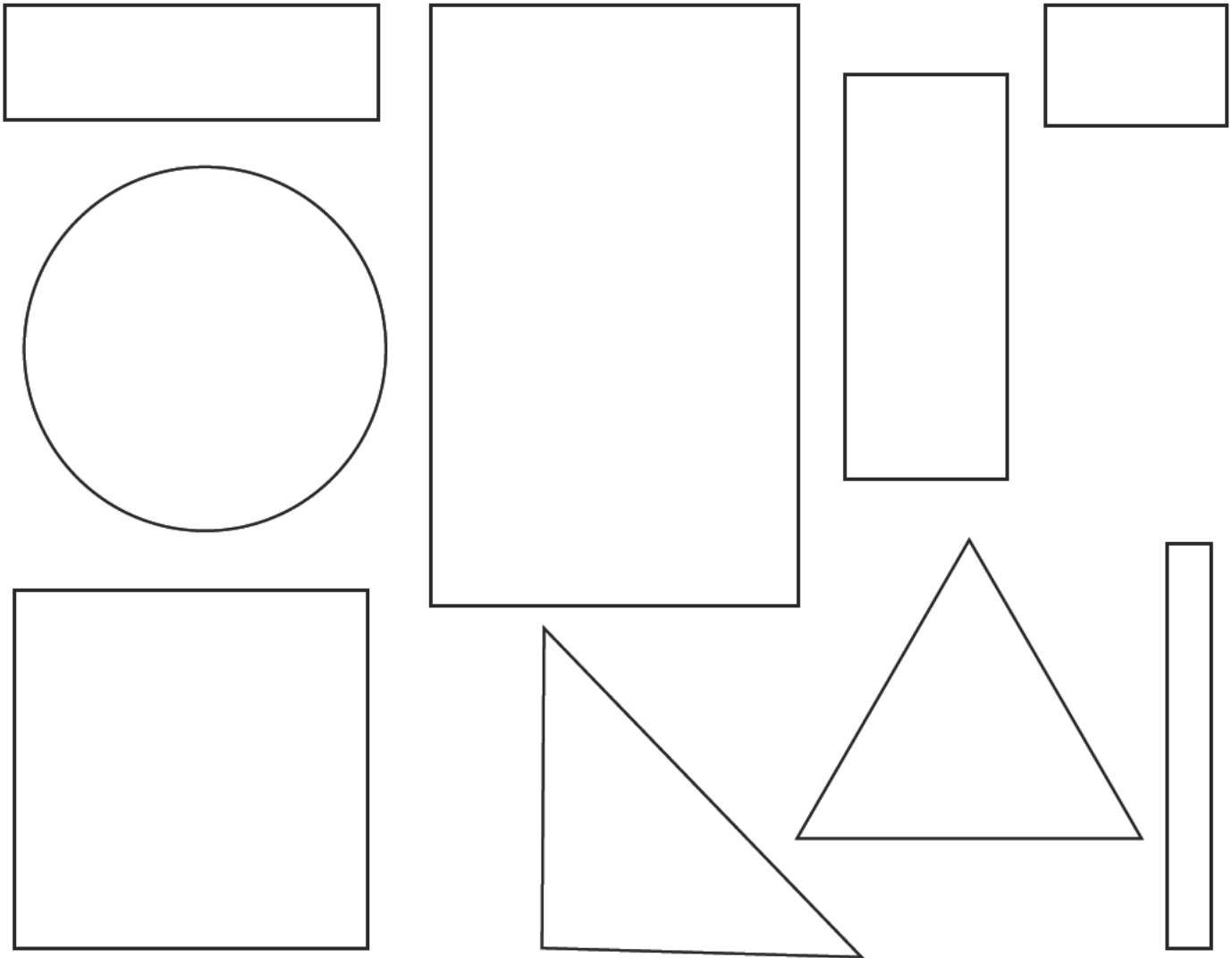
36 37 38 39 40

Name _____

Exercise 4

Day
4

Color the triangles green, the circle orange, the square blue, and the rectangles red.



Name _____

Exercise **5**

Day
5

Dear Grandma and Grandpa,

We have been having a good time with Mom and Dad since we got back home. We miss both of you so much! How are all the animals? Grandpa, did you harvest all the vegetables yet? Grandma, Mom made us some of your scrumpdelicious oatmeal! We have been practicing all the wonderful math concepts you taught us over the summer. Look how neatly we can write our numbers now!

Numbers for copywork:

40 41 42 43 44 45

46 47 48 49 50

51 52 53 54 55

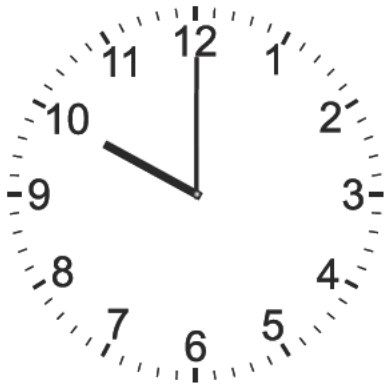
56 57 58 59 60

Name _____

Exercise 5

Day
5

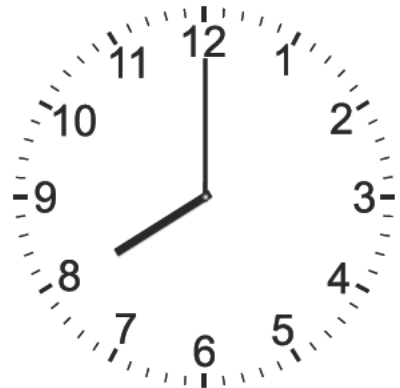
We have been practicing telling time, too! Write the correct time under each clock.



_____ o'clock

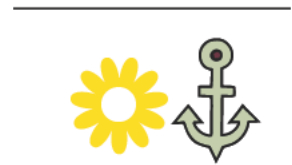
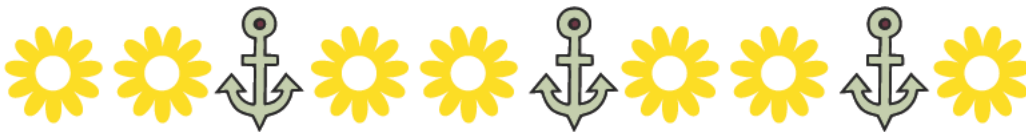


_____ o'clock



_____ o'clock

Complete the pattern:



Love lots,

Charlie, Charlotte, and our friend, _____

Home from the hospital with Ella a couple of days later, Charlie and Charlotte and their parents and grandparents busily began preparing for Thanksgiving. Grandpa had explained to the twins that the first Thanksgiving had taken place in 1621 in Plymouth in New England. Seeking religious freedom, the Pilgrims were a group of people who had come to the United States in 1620. The first winter had been incredibly tough for the Pilgrims and many died. In the spring, an Indian named Squanto, and some of his Indian friends, showed the Pilgrims how to grow corn, beans, squash, and pumpkins. Together, in the fall of 1621, the Pilgrims invited over 90 Indians to a feast to give thanks. Later, Grandpa explained that President Abraham Lincoln had officially named the fourth Thursday of November as Thanksgiving Day.

Looking forward to Thursday with much anticipation, Charlie and Charlotte were busily making colorful name cards for each place at the table. They were so excited that Grandpa and Grandma were able to stay and join them for Thanksgiving. In fact, Grandpa had promised them that later on they would do a special project with him in the garage. Finishing up the place cards, the twins cleaned up their mess and trotted off to find Grandpa.

Grandpa was deep in concentration when they found him in the garage at the workbench, looking at a pile of various-sized boards.



“Hi, children,” Grandpa said with a twinkle in his eyes.

“Hi, Grandpa!” the children replied in unison, “What are we going to make?”

“Well,” Grandpa answered, “we need something to feed the birds all winter long. Since you have been feeding them this fall, they rely on you to continue through the winter.

“Either we need to stop feeding them so they can fly south now or we need to make a feeder for them, so they have enough food for the winter and then they won’t die from lack of food.”

“We sure don’t want our pretty birds dying!” Charlie exclaimed, “We are making a bird feeder, right, Grandpa?”

“Yes, Charlie, we sure are,” Grandpa chuckled, wondering once again at the children’s enthusiasm.

Grandpa and the twins spent the rest of the afternoon working on cutting out the pieces for two bird feeders. Grandpa explained to the children how important it was to measure every piece correctly before cutting it out with the saw. Charlie and Charlotte were so tickled to help Grandpa out and keep the beautiful birds safe throughout the approaching winter months.



Teacher

The perimeters of the following shapes will not all be exact in measurement. For example, for the sake of the problem, it might say 4 inches but actually be $3\frac{1}{2}$ inches on a side. Please explain this to your students if they have their rulers out and are measuring with them.

Perimeter is the distance around a polygon. A polygon is simply a shape made with straight sides. “Poly” is a prefix which means “many”; thus, a polygon is a shape with many straight sides. To figure out the perimeter of a rectangle, we just need to add up each side, like this:



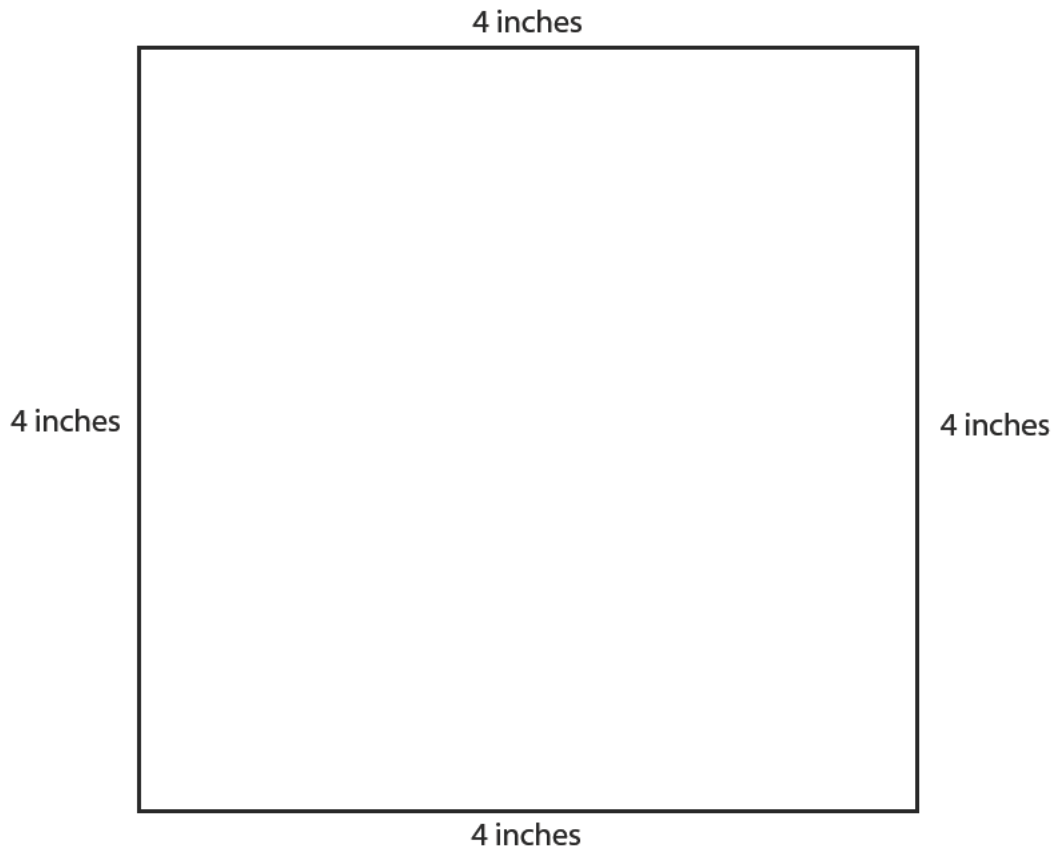
- First, add the shorter sides together:
 $2 \text{ inches} + 2 \text{ inches} = 4 \text{ inches}$
- Next, add the longer sides together.
 $4 \text{ inches} + 4 \text{ inches} = 8 \text{ inches}$
- Last, add the totals together:
 $8 \text{ inches} + 4 \text{ inches} = 12 \text{ inches}$

So the perimeter of this rectangle is 12 inches.

Name _____

Exercise 1

Day
56



For a square, add two sides together, and then add the other two sides together. Now, take those two numbers and add them together to find the perimeter.

$$4 \text{ inches} + 4 \text{ inches} = 8 \text{ inches}$$

$$4 \text{ inches} + 4 \text{ inches} = 8 \text{ inches}$$

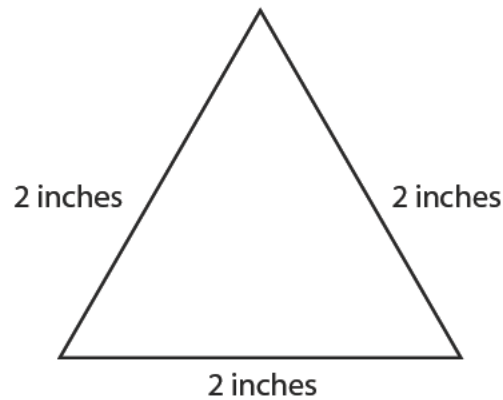
$$8 \text{ inches} + 8 \text{ inches} = 16 \text{ inches}$$

So the perimeter of this square is _____ inches.

Name _____

Exercise 1

Day
56



To figure out the perimeter of a triangle, add two sides together. Now, add that number to the other side, and you will find the perimeter. By the way, some triangles have equal sides, while other triangles have unequal sides.

$$2 \text{ inches} + 2 \text{ inches} = 4 \text{ inches}$$

$$4 \text{ inches} + 2 \text{ inches} = 6 \text{ inches}$$

So the perimeter of this triangle is _____ inches.

Name _____

Exercise 1

Day
56

Review time!

Count the nickels and write how many cents.



_____ ¢

What did you count by to come up with your answer?

Count the dimes and write how many cents.



_____ ¢

What did you count by to come up with your answer?

Name _____

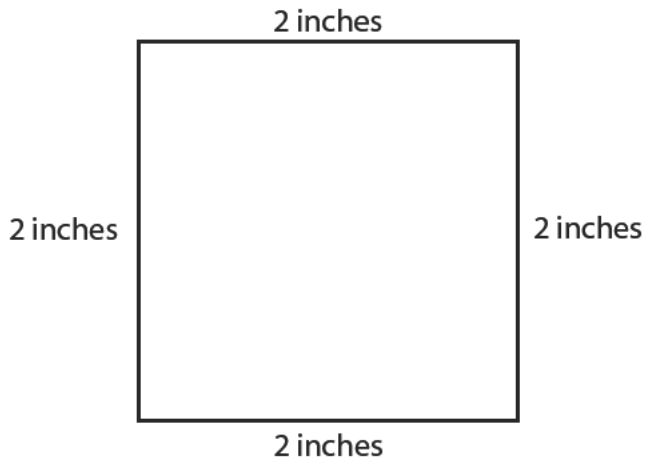
Exercise 2

Day
57

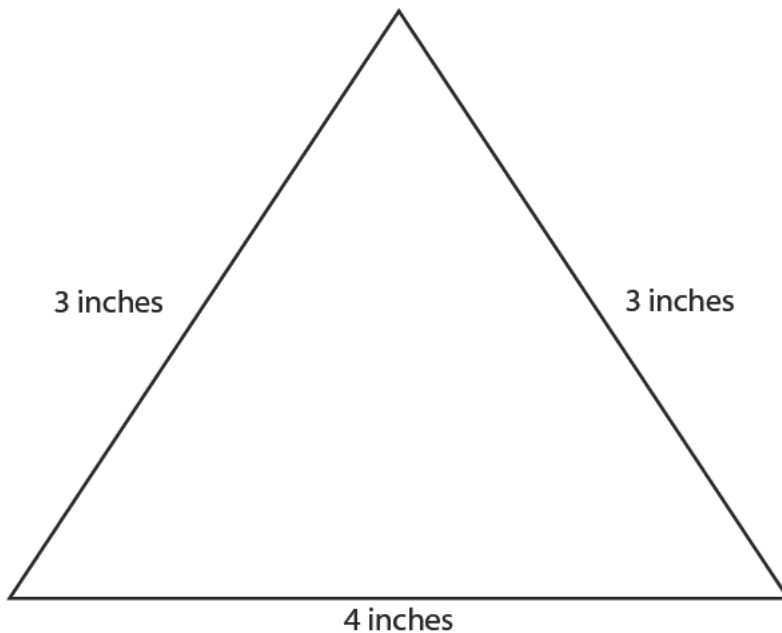
Calculate the perimeter of the following polygons, following the steps you learned in our last lesson.



_____ inches



_____ inches



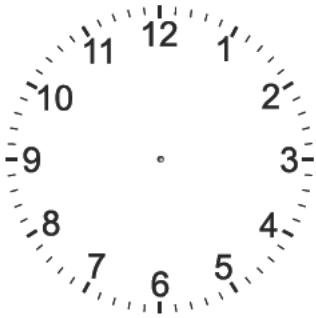
_____ inches

Name _____

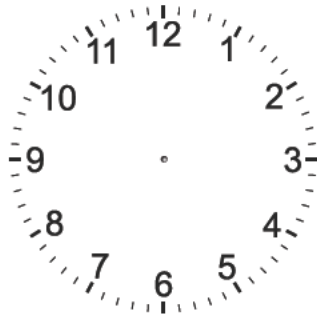
Exercise **2** Day 57

Review Time!

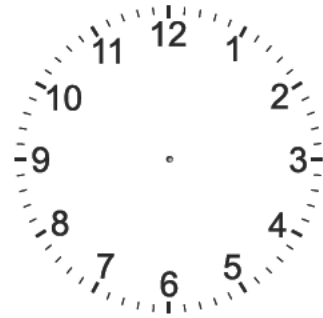
Draw hands on the clocks to show the right time.



7 o'clock



12 o'clock



3 o'clock

Name _____

Exercise 3

Day
58

In working with perimeter today, we will be doing a hands-on activity. We will use construction paper, scissors, a pencil, and a ruler. Measure and cut out the following shapes, and then figure out the perimeter for each.

- One square with 3-inch sides: _____ inches
- One triangle with 5-inch sides: _____ inches
- One rectangle with two 3-inch sides and two 6-inch sides: _____ inches
- One square with 7-inch sides: _____ inches
- One triangle with a 1-inch side and two 6-inch sides: _____ inches
- One rectangle with two 2-inch sides and two 4-inch sides: _____ inches
- For this last project today, use all the figures you have cut out, and make a giant picture. You may add in circles and ovals to complete your picture. Show it to your class or family, and share with them what you have learned about perimeter and measuring.

Review Time!

$$\begin{array}{r} 23 \\ + 46 \\ \hline \end{array} \quad \begin{array}{r} 15 \\ + 34 \\ \hline \end{array} \quad \begin{array}{r} 73 \\ + 26 \\ \hline \end{array} \quad \begin{array}{r} 58 \\ + 21 \\ \hline \end{array}$$

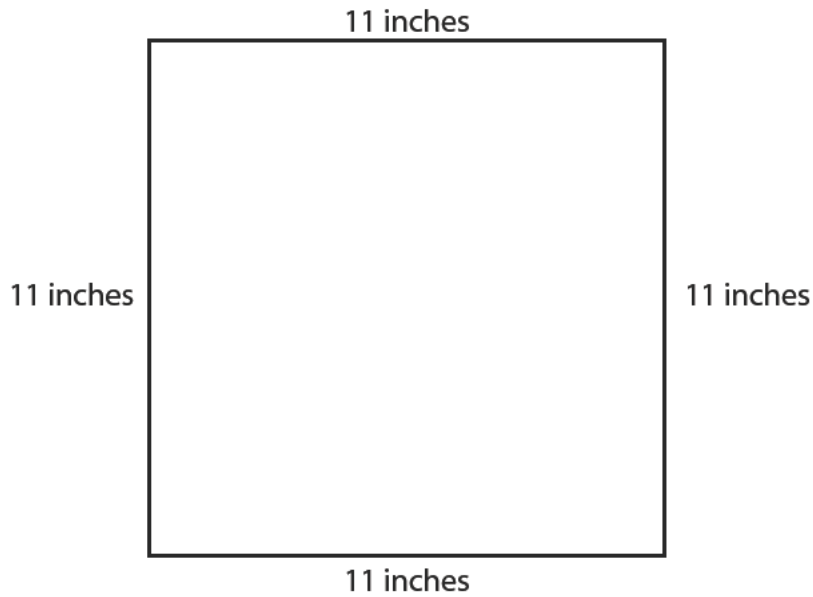
Use your flashcards to review addition and subtraction facts.

Name _____

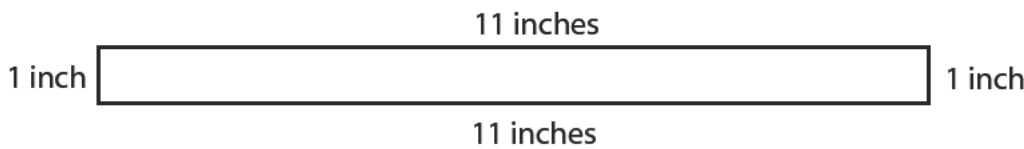
Exercise 4

Day
59

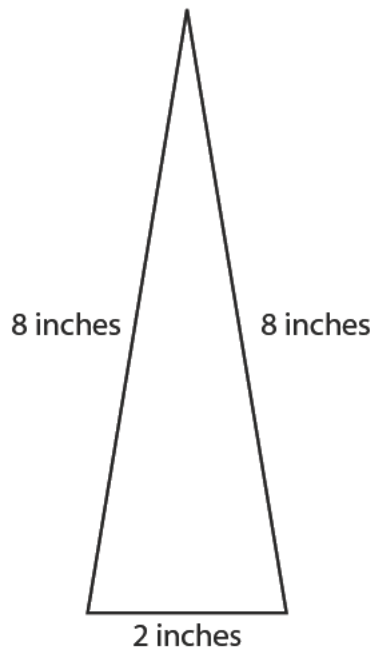
Figure out the perimeter of the following shapes. You will notice that you will be adding with some double digits today.



_____ inches



_____ inches



_____ inches

Review Time!

Use your addition and subtraction flashcards to review your facts.

Name _____

Exercise 5

Day
60

To solve the following word problems involving perimeter, first draw the figure on another piece of paper, and label each side. Next, figure out the perimeter using the steps taught earlier in the lesson.

We have a rectangle with two 6-inch sides and two 8-inch sides. What is the perimeter?

We have a triangle with one side that is 4 inches, one side that is 3 inches, and one side that is 5 inches. What is the perimeter?

We have a square with 7-inch sides. What is the perimeter?

Just for Fun!

Have you ever had a bird feeder or a birdhouse? Charlie and Charlotte are so excited to feed the birds all winter long. You don't have to have a bird feeder to feed the birds. There are many other ways to feed the birds all year long. One of them includes decorating a tree for the birds using dried fruit, birdseed, peanut butter, popcorn, and old bagels and bread. Listed on the next page are some ideas for you.

Wildlife Energy Muffins

You will need:

- 1 cup chunky peanut butter
- 1 cup pure rendered suet or vegetable shortening
- $2\frac{1}{2}$ cups coarse yellow corn meal
- Seeds, raisins, or other dried fruit and roasted peanuts
- Pipe cleaners

1. Mix peanut butter, suet, and corn meal together. Stir in seeds, fruit, and nuts.
2. Make “muffins” by placing the mixture into a muffin tin. Sprinkle seeds on top.
3. Place a pipe cleaner in each muffin to act as a hanger, and place the tin in the freezer to harden.
4. Once hardened, hang the muffins from a tree.

Bagels for the Birds

You will need:

- 1 bag of bagels (old, stale ones work best)
- 1 jar of plain peanut butter
- 1 bag of birdseed
- 1 roll of ribbon (cloth or gift wrapping ribbon)

1. Split bagels lengthwise, and let them harden overnight. Tie lengths of ribbon through each bagel hole.
2. Spread peanut butter over both sides of each bagel slice.
3. Sprinkle with birdseed.
4. Hang bagels throughout your backyard.

Name _____

Exercise 5

Day
60

Use this page to create a “Backyard Bird-watching Journal” of your very own. Your teacher has permission to make as many copies as you need. Have a bird field guide for your state or area handy, to identify the birds that come to your yard.



(A picture or drawing of the bird I saw.)

Where I saw it: _____

What kind of bird is it? _____

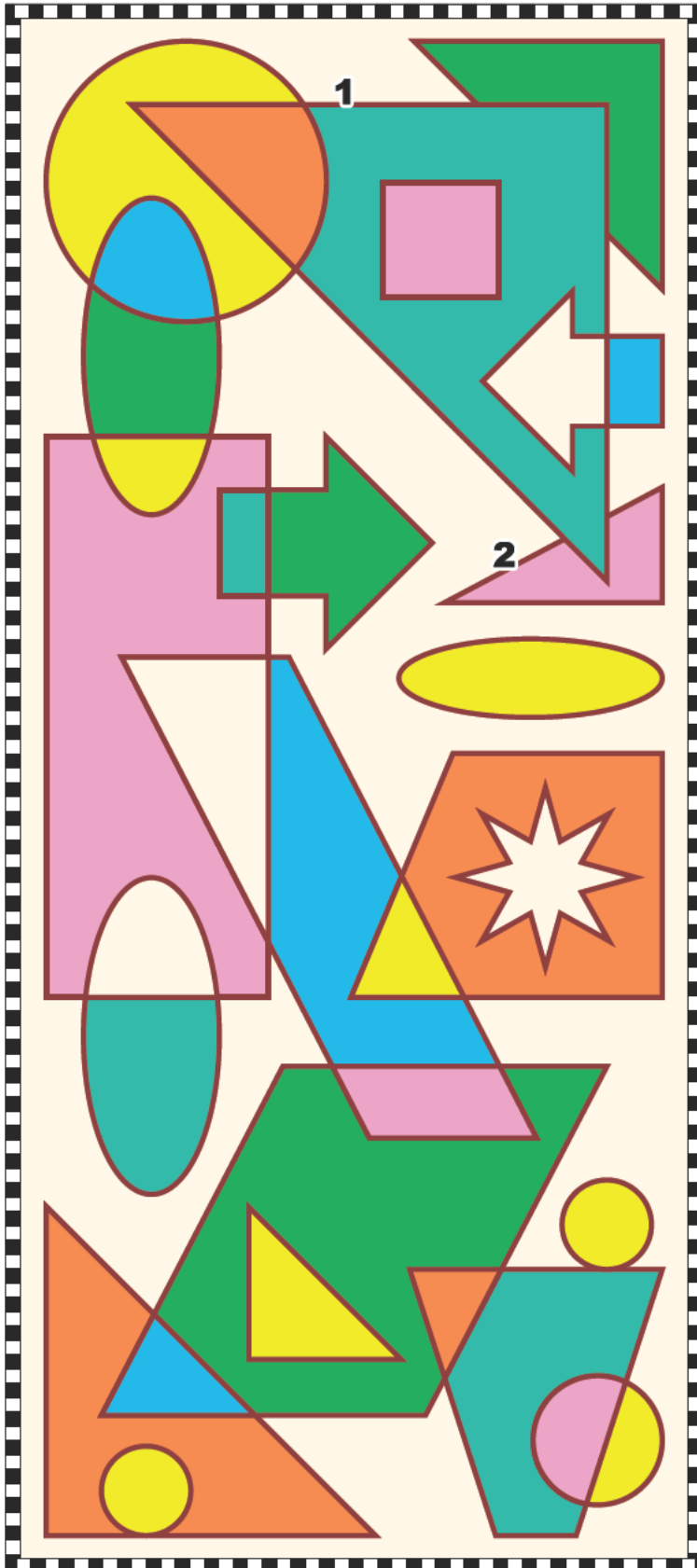
What kind of food does it like? _____

Describe it:

Name _____

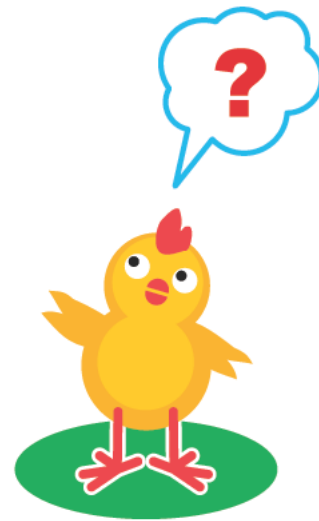
Exercise 5

Day
60



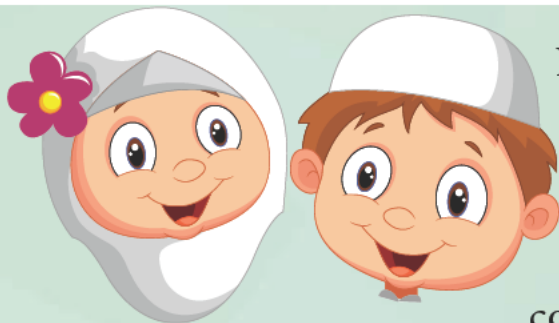
How many triangles are here?

Count only those that have the entire shape visible. For example, 1, and not 2.



More Measurement Concepts — Gallons, Quarts, Pints, Cups

Lesson 24



Nothing thrilled the twins more these days than receiving mail from Hairo and Natalia. The letters their Peruvian friends wrote needed to be translated by someone who could speak both English and Spanish so Charlie and Charlotte could read them. Mom was teaching the children

how to count in Spanish (uno, dos, tres, cuatro, cinco, seis, siete, ocho, nueve, diez), the Spanish alphabet, and how to sing “Jesus Loves Me” in Spanish, but they were far from being able to interpret Hairo and Natalia’s letters in Spanish without help from a translator. Thankfully, there was such a person at the orphanage who could read, write, and speak both Spanish and English. The translator wrote the letters in English before sending them off to the very eager twins in the United States. Today, the letters had contained a couple of recipes for Charlie and Charlotte to make with Mom. They could hardly wait to begin cooking these South American specialities. The first one was “Papas a la Huancaína” (Potatoes with Cheese). The recipe read as follows:

Papas a la Huancaína (Potatoes with Cheese)

8 potatoes, peeled and cubed
water

$1\frac{1}{2}$ cups heavy cream

$\frac{1}{2}$ tsp. turmeric

3 cups Monterey Jack cheese

1. Boil the potatoes, covered, until tender. Drain and set aside.
2. In a small saucepan, heat cream over low heat. Do not bring to a boil. Stir in cheese and turmeric. Continue to stir until cheese is melted. Add potatoes, cooking until potatoes are heated through. Serve warm or cold.





The other recipe was called “Alfajores” (or Caramel-filled Cookies). It read as follows:

Alfajores (Caramel-filled Cookies)

2 cups cornstarch	2 eggs
1 cup flour	1 tsp. vanilla
1 cup sugar	3 tbsp. milk
$\frac{1}{2}$ tsp. baking powder	1 can (13.4 oz.) Dulce de Leche*
$\frac{3}{4}$ cup butter, room temp.	Powdered sugar

1. Preheat oven to 300°F. Combine dry ingredients in a large bowl. Cut in butter and stir until mixture resembles coarse crumbs. Add eggs, vanilla, and milk. Knead until smooth. Let dough rest for 20 minutes.
2. Roll dough out at about $\frac{1}{4}$ inch thickness. Cut out cookies with a cookie cutter. Bake for 20 minutes or until cookies begin to brown. Remove from oven and cool.
3. Spread dulce de leche on one side of the cookie and top with another cookie. Roll cookie sandwich in powdered sugar. Repeat with remaining cookies. Serve.

Dulce de Leche*

1 can sweetened condensed milk

1. Remove label from can. Pierce the top, using a can opener, with two holes.
2. Place in a pot, pierced end up, and fill pot with water about $\frac{1}{4}$ inch from the top of the can.
3. Bring to a boil. Reduce heat and simmer, uncovered, for 3 hours. You may need to add more water as the water evaporates.
4. Remove from water and cool.



As Charlie, Charlotte, and Mom patiently waited for the Dulce de Leche to finish, Mom worked on more measurement concepts with them. She told them that 1 cup is equal to 8 oz., 2 cups is equal to 1 pint, 2 pints is equal to 1 quart, and 4 quarts is equal to 1 gallon. The children knew what a gallon looked like because they often bought milk in a gallon jug. Mom also showed them a one-cup measuring cup, a pint container of sour cream, and a one quart container of buttermilk. As they worked on their measurement flashcards at the table, they eagerly anticipated finishing the delicious-smelling cookies.

Teacher

You will need to gather measuring devices for 1 cup, 1 pint, 1 quart, and 1 gallon for Exercise 2. Also, gather items for a recipe you would enjoy making with students for Exercise 3.

Name _____

Exercise 1

Day
116

Today you will be putting together a “Mr. Measure” to help you better understand some of the measurements we have been learning about. To construct your “Mr. M,” first cut out the figures on the next few pages, and sort them into piles. Next, take your gallon-sized “Mr. M” and attach the 4 quarts (his arms and legs) to him, since we know that there are 4 quarts in a gallon. Now, take the 8 pints and attach 2 to each quart, because there are 2 pints in each quart. Lastly, take the 16 cups and attach 2 to each pint, because there are 2 cups in a pint. Now, you have “Mr. Measure” to help you learn measurements.

Name _____

Exercise **1**

Day
116



Name _____

Exercise 1

Day
116



Name _____

Exercise **1**

Day
116



Name _____

Exercise 1

Day
116



Name _____

Exercise 1

Day
116



Name _____

Exercise 2

Day
117

Fun with measurements! Today you will further explore the measurements of one cup (c.), one pint (pt.), one quart (qt.), and one gallon (gal.) by doing some hands-on experimenting. Take the measuring devices that you and your teacher have gathered and, using rice, begin measuring with the measuring cup (1 c.) and fill the pint container.

- How many cups are in the pint? _____ c.
- Now, take your one-cup measuring cup, and see how many cups are in a quart. Write your findings on the line here. _____ c.
- Next, take your one-cup measuring cup, and find out how many cups are in a gallon. Write the amount here. _____ c.
- How many pints are in a quart? _____ pt.
- How many pints are in a gallon? _____ pt.
- How many quarts are in a gallon? _____ qt.
- If your teacher allows you to, continue experimenting with these measurements using water (in the bathtub or sink).

Name _____

Exercise 3

Day
118

Today you will begin working on your measurement flashcards for cups, pints, quarts, and gallons. Also, you will be following a recipe and cooking something with your teacher's help. You may follow one of the recipes from Hairo and Natalia in this lesson, or you may choose something out of a cookbook. In the box below, draw a picture of whatever you chose to make.

My Picture



Match the correct picture with the clue provided. There may be more than one clue for each picture.

1. There are 4 of me in a gallon.
2. There are 2 of me in a quart.
3. There are 4 of me in a quart.
4. There are 16 of me in a gallon.
5. There are 8 of me in a gallon.
6. One of me holds 4 quarts.
7. One of me holds 4 cups.
8. One of me holds 2 cups.
9. One of me holds 16 cups.
10. One of me holds 8 pints.



- Take out all the flashcards you have made over the year. What a stack! Take the time to review all the flashcards you have made. You sure have learned a lot!

Name _____

Exercise 5

Day
120

The twins really enjoyed making the recipes that their Peruvian friends sent! They want to write a thank you letter and send them one of their own favorite recipes. (In the space below write down one of your favorite recipes.)

My Favorite Recipe



Dear Hairo and Natalia,

Thank you so much for sending the recipes! We made them with Mom, and they were so yummy! We have been learning about measurements. Some units of measure are used to measure length, some are used to measure weight, while others are used to measure liquids. We have shown you how to measure temperature and length. This is how you measure liquid:

(Match the picture to the correct word)

1 gallon

1 quart

1 pint

1 cup



We also learned...

1 gallon = _____ quarts

1 quart = _____ pints

1 pint = _____ cups

Love,

Charlie, Charlotte, and our friend, _____

Name _____

Exercise 5

Day
120

Count how many of each kind of animal or bird, and put the number in the circles below.



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

10 11 12 13 14 15 16 17 18 19 20 =

0 1 2 3 4 5 6 7 8 9 + - =

Review of Addition and Subtraction Fact Families

Make fact families with the following groups of numbers. The first one is done for you.

4 6 10

2 8 10

4 6 10

$$4 + 6 = 10$$

$$6 + 4 = 10$$

$$10 - 6 = 4$$

$$10 - 4 = 6$$

7 9 16

3 8 11

6 7 13

8 9 17

5 7 12

6 8 14

6 9 15

--	--	--

6 5 11

8 5 13

7 4 11

--	--	--

On the following page, you will be creating a page of math opposites. For example: Adding is opposite of subtracting because the answer to an addition problem is bigger than both of the numbers added together, and the answer to a subtraction problem is smaller than both of the other numbers in the problem.

Think of any other math opposites you have learned this year!

Math Opposites



Congratulations!
You Are Finished!