MATH

LESSONS FOR A LIVING EDUCATION

level 4

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This book is dedicated to Grace,
who doesn't hate math anymore!

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Scope and Sequence

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 and activities 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
	Solution Manual for worksheets is available in the back of this book
	Review sections can be used as quizzes
	Worksheets are included for each section
	Designed for grade 4 in a one-year course

Course Description

Welcome to the fourth 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, copywork, 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, taught through hands-on learning. Sometimes, this lesson is learned by the twins' explorations in nature. After the story, there are exercises for students to practice the lesson they learned and to review what they have learned earlier. The last 6 lessons are focused reviews, covering topics learned throughout the first 30 lessons.

Course Objectives: Students completing this course will

- ✔ Explore multiplication, geometric concepts, and metric units of measurement
- ✔ Identify patterns on charts and graphs, and large number multiplication
- ✔ Learn equivalent fractions, money work, percentages, and basic geometry
- ✔ Review concepts focused on addition, subtraction, multiplication, division, decimals, and fractions

Teaching mathematics as a living subject

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 4 is meant to reach into a child's world, grab their attention 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.

Teacher

Instructor may need to review and give extra help for some of the new concepts introduced, especially in the first six lessons. Spend as much time as needed with the students, teaching or reviewing concepts they may be struggling with.

First Semester Suggested Daily Schedule

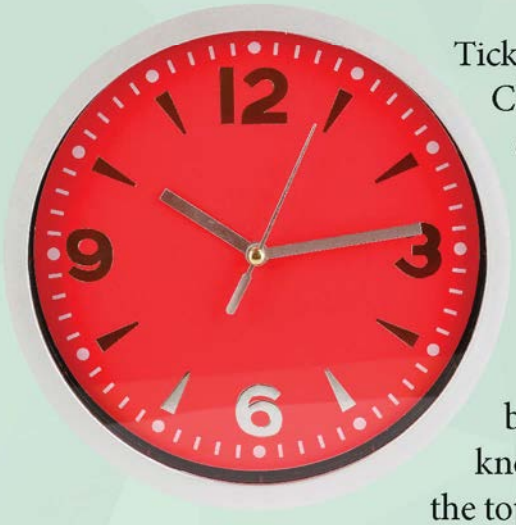
Date	Day	Assignment	Due Date	✓	Grade
First Semester-First Quarter					
Week 1	Day 1	Read Lesson 1 • Pages 15-16 Complete Lesson 1 Exercise 1 • Page 17			
	Day 2	Complete Lesson 1 Exercise 2 • Page 18			
	Day 3	Complete Lesson 1 Exercise 3 • Page 19			
	Day 4	Complete Lesson 1 Exercise 4 • Page 20			
	Day 5	Complete Lesson 1 Exercise 5 • Pages 21-22			
Week 2	Day 6	Read Lesson 2 • Page 23 Complete Lesson 2 Exercise 1 • Page 24			
	Day 7	Complete Lesson 2 Exercise 2 • Page 25			
	Day 8	Complete Lesson 2 Exercise 3 • Page 26			
	Day 9	Complete Lesson 2 Exercise 4 • Page 27			
	Day 10	Complete Lesson 2 Exercise 5 • Page 28			
Week 3	Day 11	Read Lesson 3 • Page 29 Complete Lesson 3 Exercise 1 • Page 30			
	Day 12	Complete Lesson 3 Exercise 2 • Page 31			
	Day 13	Complete Lesson 3 Exercise 3 • Page 32			
	Day 14	Complete Lesson 3 Exercise 4 • Page 33			
	Day 15	Complete Lesson 3 Exercise 5 • Page 34			
Week 4	Day 16	Read Lesson 4 • Page 35 Begin Lesson 4 Exercise 1-2 • Page 37			
	Day 17	Finish Lesson 4 Exercise 1-2 • Page 37			
	Day 18	Complete Lesson 4 Exercise 3 • Page 38			
	Day 19	Complete Lesson 4 Exercise 4 • Page 39			
	Day 20	Complete Lesson 4 Exercise 5 • Page 40			
Week 5	Day 21	Read Lesson 5 • Page 41 Complete Lesson 5 Exercise 1 • Pages 42-43			
	Day 22	Complete Lesson 5 Exercise 2 • Page 44			
	Day 23	Complete Lesson 5 Exercise 3 • Page 45			
	Day 24	Complete Lesson 5 Exercise 4 • Pages 46-47			
	Day 25	Complete Lesson 5 Exercise 5 • Page 48			
Week 6	Day 26	Read Lesson 6 • Page 49 Complete Lesson 6 Exercise 1 • Page 50			
	Day 27	Complete Lesson 6 Exercise 2 • Page 51			
	Day 28	Complete Lesson 6 Exercise 3 • Page 52			
	Day 29	Complete Lesson 6 Exercise 4 • Page 53			
	Day 30	Complete Lesson 6 Exercise 5 • Page 54			

Date	Day	Assignment	Due Date	✓	Grade
Week 7	Day 31	Read Lesson 7 • Page 55 Complete Lesson 7 Exercise 1 • Pages 56-57			
	Day 32	Complete Lesson 7 Exercise 2 • Page 58			
	Day 33	Complete Lesson 7 Exercise 3 • Pages 59-60			
	Day 34	Complete Lesson 7 Exercise 4 • Page 61			
	Day 35	Complete Lesson 7 Exercise 5 • Page 62			
Week 8	Day 36	Read Lesson 8 • Pages 63-64 Complete Lesson 8 Exercise 1 • Pages 65-66			
	Day 37	Complete Lesson 8 Exercise 2 • Pages 67-68			
	Day 38	Complete Lesson 8 Exercise 3 • Pages 69-70			
	Day 39	Complete Lesson 8 Exercise 4 • Page 71			
	Day 40	Complete Lesson 8 Exercise 5 • Page 72			
Week 9	Day 41	Read Lesson 9 • Pages 73-74 Complete Lesson 9 Exercise 1 • Pages 75-76			
	Day 42	Complete Lesson 9 Exercise 2 • Pages 77-78			
	Day 43	Complete Lesson 9 Exercise 3 • Page 79			
	Day 44	Complete Lesson 9 Exercise 4 • Pages 80-81			
	Day 45	Complete Lesson 9 Exercise 5 • Page 82			
First Semester-Second Quarter					
Week 1	Day 46	Read Lesson 10 • Page 83 Begin Lesson 10 Exercise 1-2 • Pages 84-85			
	Day 47	Finish Lesson 10 Exercise 1-2 • Pages 84-85			
	Day 48	Complete Lesson 10 Exercise 3 • Page 86			
	Day 49	Begin Lesson 10 Exercise 4-5 • Pages 87-88			
	Day 50	Finish Lesson 10 Exercise 4-5 • Pages 87-88			
Week 2	Day 51	Read Lesson 11 • Pages 89-90 Complete Lesson 11 Exercise 1 • Pages 91-92			
	Day 52	Complete Lesson 11 Exercise 2 • Page 93			
	Day 53	Complete Lesson 11 Exercise 3 • Page 94			
	Day 54	Complete Lesson 11 Exercise 4 • Page 95			
	Day 55	Complete Lesson 11 Exercise 5 • Page 96			
Week 3	Day 56	Read Lesson 12 • Pages 97-98 Complete Lesson 12 Exercise 1 • Pages 99-100			
	Day 57	Complete Lesson 12 Exercise 2 • Pages 101-102			
	Day 58	Complete Lesson 12 Exercise 3 • Pages 103-104			
	Day 59	Complete Lesson 12 Exercise 4 • Page 105			
	Day 60	Complete Lesson 12 Exercise 5 • Page 106			

Date	Day	Assignment	Due Date	✓	Grade
Week 4	Day 61	Read Lesson 13 • Pages 107-108 Complete Lesson 13 Exercise 1 • Pages 109-110			
	Day 62	Complete Lesson 13 Exercise 2 • Pages 111-112			
	Day 63	Complete Lesson 13 Exercise 3 • Pages 113-114			
	Day 64	Complete Lesson 13 Exercise 4 • Pages 115-116			
	Day 65	Complete Lesson 13 Exercise 5 • Page 117-118			
Week 5	Day 66	Read Lesson 14 • Pages 119-120 Complete Lesson 14 Exercise 1 • Pages 121-122			
	Day 67	Complete Lesson 14 Exercise 2 • Pages 123-124			
	Day 68	Complete Lesson 14 Exercise 3 • Pages 125-126			
	Day 69	Complete Lesson 14 Exercise 4 • Page 127			
	Day 70	Complete Lesson 14 Exercise 5 • Page 128			
Week 6	Day 71	Read Lesson 15 • Page 129 Complete Lesson 15 Exercise 1 • Pages 130-132			
	Day 72	Complete Lesson 15 Exercise 2 • Pages 133-134			
	Day 73	Complete Lesson 15 Exercise 3 • Page 135			
	Day 74	Complete Lesson 15 Exercise 4 • Page 136			
	Day 75	Complete Lesson 15 Exercise 5 • Pages 137-138			
Week 7	Day 76	Read Lesson 16 • Page 139 Complete Lesson 16 Exercise 1 • Page 140			
	Day 77	Complete Lesson 16 Exercise 2 • Page 141			
	Day 78	Complete Lesson 16 Exercise 3 • Page 142			
	Day 79	Complete Lesson 16 Exercise 4 • Page 143			
	Day 80	Complete Lesson 16 Exercise 5 • Page 144			
Week 8	Day 81	Read Lesson 17 • Pages 145-146 Complete Lesson 17 Exercise 1 • Page 147			
	Day 82	Complete Lesson 17 Exercise 2 • Pages 148-149			
	Day 83	Complete Lesson 17 Exercise 3 • Page 150			
	Day 84	Complete Lesson 17 Exercise 4 • Pages 151-152			
	Day 85	Complete Lesson 17 Exercise 5 • Pages 153-154			
Week 9	Day 86	Read Lesson 18 • Pages 155-156 Complete Lesson 18 Exercise 1 • Pages 157-158			
	Day 87	Complete Lesson 18 Exercise 2 • Page 159			
	Day 88	Complete Lesson 18 Exercise 3 • Pages 160-161			
	Day 89	Complete Lesson 18 Exercise 4 • Pages 162-163			
	Day 90	Complete Lesson 18 Exercise 5 • Pages 164-166			
		Mid-Term Grade			

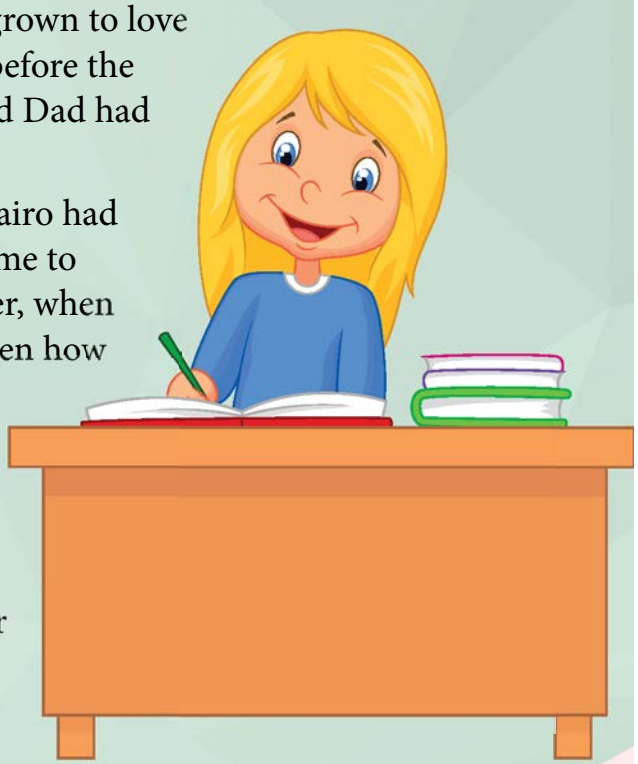
Review of All Addition and Subtraction Concepts

Lesson 1



Tick...tock...tick...tock... The clock ticked loudly as Charlie, Charlotte, Natty, and Hairo worked quietly at their desks. Hairo watched as the seconds hand on the clock worked its way around the numbers. The room was quiet except for the sound of Mom's voice drifting in from the next room. She was reading "Goodnight Moon" to Ella in preparation for the toddler's nap time. Hairo glanced over at Natty. He could not believe how his sister had changed over the winter. He knew that he had also changed. His jeans didn't touch the top of his shoes anymore, and he gained weight, too, but Natalia, whom the family called "Natty," had changed and grown even more. Natty's hair was long now, and she was almost as tall as Charlotte. More than her appearance had changed; she was calmer and smiled more often.

Natty had suffered greatly from their parents' passing, and she had picked up many nervous habits during their stay at the children's home in Peru. Hairo smiled to himself remembering how surprised he and his sister had been the day of the adoption announcement. He had kept this memory tucked in a special place in his heart. It had been last summer when his "new" family had come to Peru on a mission trip. They had spent most of their time together and grown to love each other dearly. At the end of the summer, shortly before the family was scheduled to return to the States, Mom and Dad had excitedly broken the news of the adoption.



Natty had been excited to the point of tears, but Hairo had been more hesitant. Even when they had all flown home to Minnesota, Hairo had harbored reservations. However, when they had arrived at their new home, and Hairo had seen how much love had gone into the preparations for their arrival, he had slowly lowered the guard around his heart. Over the winter, they all had adjusted to Hairo's and Natty's presence in the home. Now it was spring, and there was only a few weeks of school left before summer break! Hairo had enjoyed his first year of homeschool, but he was excited for summer.

"Hairo!" Charlie's voice made Hairo jump. "You look like you're half asleep!"

"I'm not asleep," Hairo replied, "but I am tired. The ticking of the clock was making me sleepy." Hairo yawned and ran his hands through his dark hair, making it stick straight up.

Mom poked her head around the corner to check on the children.

"Are you children finished with your handwriting?" she asked.

Charlie and Hairo shook their heads "no."

"I am, Mom," Natty proudly waved her paper in the air. Mom came over to look at Natty's paper and gave the little girl a hug. She was so happy that Natty now called her "Mom." Both of her adopted children had started calling her this as a Christmas present. The first time Hairo had called her "Mom" instead of "Mrs. Stevens," she had cried. Both of these darling, dark-eyed children were so precious to her! Now she looked at Natty's carefully-written cursive and exclaimed, "Natty, this is beautiful! Do you want to hang it on the wall?"

"I would really like to give it to Grandma Violet, if that is ok," Natty replied thoughtfully.

"Natty, that is a great idea! Mom, may I give Grandma mine, too?" Charlotte asked.

"Yes, of course you may! Why don't we all take a break for a few minutes and go outside? Then we can come back in to finish our math lesson," Mom suggested.

Name_____

Exercise 1

Day 1

Let's practice and review our addition and subtraction facts.

2 + 5 =	5 + 6 =	7 + 7 =	9 - 0 =
3 + 5 =	6 + 6 =	9 - 8 =	10 - 8 =
4 + 5 =	7 + 6 =	9 - 7 =	10 - 7 =
5 + 5 =	13 + 17 =	9 - 6 =	10 - 6 =
6 + 5 =	21 + 16 =	9 - 5 =	10 - 5 =
7 + 5 =	3 + 7 =	9 - 4 =	10 - 4 =
2 + 6 =	4 + 7 =	9 - 3 =	10 - 3 =
3 + 6 =	5 + 7 =	9 - 2 =	10 - 2 =
4 + 6 =	6 + 7 =	9 - 1 =	99 - 66 =

What time is it?

_____:_____

_____:_____

_____:_____

_____:_____

Fill in the clocks with the correct time.

School begins

_____:_____

Lunchtime

_____:_____

School ends

_____:_____

bedtime

_____:_____

Name_____

Exercise 2

Day 2

Fill in the missing numbers. Narrate to your teacher what you are doing.

4 + ____ = 9	____ + 2 = 10	2 + ____ = 14
12 − ____ = 7	____ − 7 = 4	10 − ____ = 9
1 + ____ = 8	____ + 1 = 14	9 + ____ = 19
13 − ____ = 8	____ − 7 = 10	20 − ____ = 15
9 + ____ = 11	____ + 2 = 20	3 + ____ = 16
10+ ____ = 17	____ − 9 = 12	11 − ____ = 3

Fill in the blanks with either = or ≠.

4 + 2 ____ 8	11 ____ 4 + 7
1 + 3 ____ 7 - 2	13 − 2 ____ 9 + 2

Fill in the blanks with either < or >.

5 + 4 ____ 4 + 8	9 + 9 ____ 8 + 9
4 + 7 ____ 12 - 4	12 + 2 ____ 6 x 2

If it's 10:20 now, What time will it be in 4 hours and 10 minutes?

Draw and write the time

_____:_____

Name_____

Exercise 3

Day 3

Add:

$ 12.77	$ 3.56	$ 458.17
22.23	2.12	326.29
+ 16.12	+ 1.45	+ 891.00

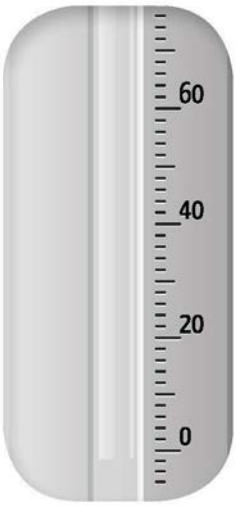
5,248	7,319	4,091	1,900
1,274	1,274	2,890	2,310
+ 2,468	+ 2,468	+ 1,002	+ 3,451

Write the temperatures.

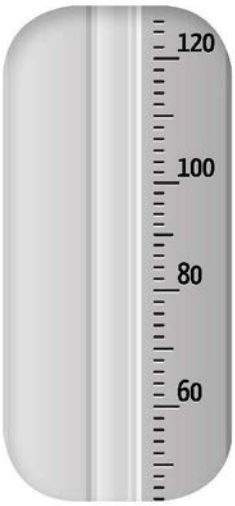
_____°

_____°

Shade the temperatures on the thermometers.



46°



122°

Name_____

Exercise 4 Day 4

Solve and show work.

1. There are 50 fence posts in the fence around Grandpa's barn, 129 posts around the back pasture, and 125 around the front cow pasture. How many fence posts are there all together?

2. When the girls helped Mom and Grandma Violet pick apples last fall, they picked 210 apples one day and 275 apples the second day. How many more apples did they pick the second day? Solve the problem and circle the words in the problem that helped you know what to do.

3. The girls helped Grandma Violet and Mom can the apples. There were 72 quart-sized jars of applesauce, 30 jars of apple pie filling, and 10 pint-sized jars of baby applesauce for Ella. How many jars of preserved apples did they make all together?

4. The boys went with Dad and Grandpa Peter on two construction jobs during the fall. They traveled 119 miles to one of the locations and 310 miles to the second one. How many more miles away was the second location?

Name_____

Exercise 5

Day 5

Subtract:

3,446	6,400	3,000	4,377
- 1,458	- 1,211	- 2,232	- 2,473

98	74	36	47
- 48	- 56	- 24	- 29

Draw lines starting at the stars.

$3\frac{1}{2}$ inches ☆

$6\frac{1}{4}$ inches ☆

$\frac{1}{2}$ inch ☆

Name_____

Exercise 5 Day 5

Puzzle Time.

Sudoku is a popular math puzzle that appeared first in the 19th century newspapers in France, but was not popularized until the late 1980s in Japan.

The puzzle below features a 9 x 9 box (count the first row of blocks = 9 and then count the first column of blocks = 9) divided into three 3 x 3 grids. The game requires the player to use the numbers 1–9 only one time per 3 x 3 square, on each column, and each row. So when you read the numbers by row or by column or within the 3 x 3 squares, the numbers 1–9 appear only once.

See if you can solve the 3 x 3 square in the center of the puzzle. (Hint: Look at the numbers that already exist in the rows that are missing a number. Write down the missing numbers for each row and column. Now, compare those numbers to the numbers that already are either in the 3 x 3 square, row, or column. Then see how you can place the missing numbers and not repeat numbers 1–9 in the 3 x 3 area, the column, or the row.) It's a little hard at first, but remember this is a fun way to learn! (If you're not sure what to do, ask your teacher for help.)

3 x 3 = 9 Rows

3 x 3 = 9 Columns

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

Number Grouping — Understanding Larger Multiplication

Lesson 12

What a wonderful vacation the Stevens family was having! During the past week, they had explored the badlands, which is a dry, desolate region in South Dakota, comprised of many rocky structures carved by wind and water. The kids had really enjoyed hiking and climbing on these strangely-shaped rocky formations.

They also had driven through the Black Hills and had seen many spectacular views. Dad had explained to the children that the Black Hills got their name because, from a distance, they appear black. This was the result of the many evergreen trees that grow on the mountains. While traveling through the Black Hills, they had seen many herds of buffalo, some mountain goats, a couple of bighorn sheep, and even one little prairie dog.

They had explored Custer State Park one day as well. Mom told the children that the park has one of the largest herds of buffalo in the United States. The park guide told Charlie and his siblings that about 1,500 buffalo roam throughout Custer State Park, and that every year, all of them are rounded up and given any necessary medical care. Charlie wondered if he would ever be visiting the park during the round-up! That would be amazing, he thought, to see that many buffalo all together!

Today, after the family cleaned up from breakfast, they would be on their way to Mount Rushmore. As the family all pitched in and helped with the dishes, Charlie exclaimed, "I can't wait to see Mount Rushmore! Which four presidents' faces are carved on the mountain, Mom? I can't remember all of them."

Mom, smiling at her son's contagious enthusiasm, responded, "Which ones do you remember?"

Charlie's eyes lit up as he answered, "Well, I do know George Washington, our country's first president, is up there. And I remember that Abraham Lincoln, our sixteenth president, is up there as well! But, I can't remember the other two; Charlotte, do you remember?" Charlie's gaze shifted to his twin.

Charlotte timidly aimed her answer at Mom, with questioning eyes, "Is another one Thomas Jefferson?"

Mom nodded and Charlotte went on, "And is the fourth one Theodore Roosevelt?"

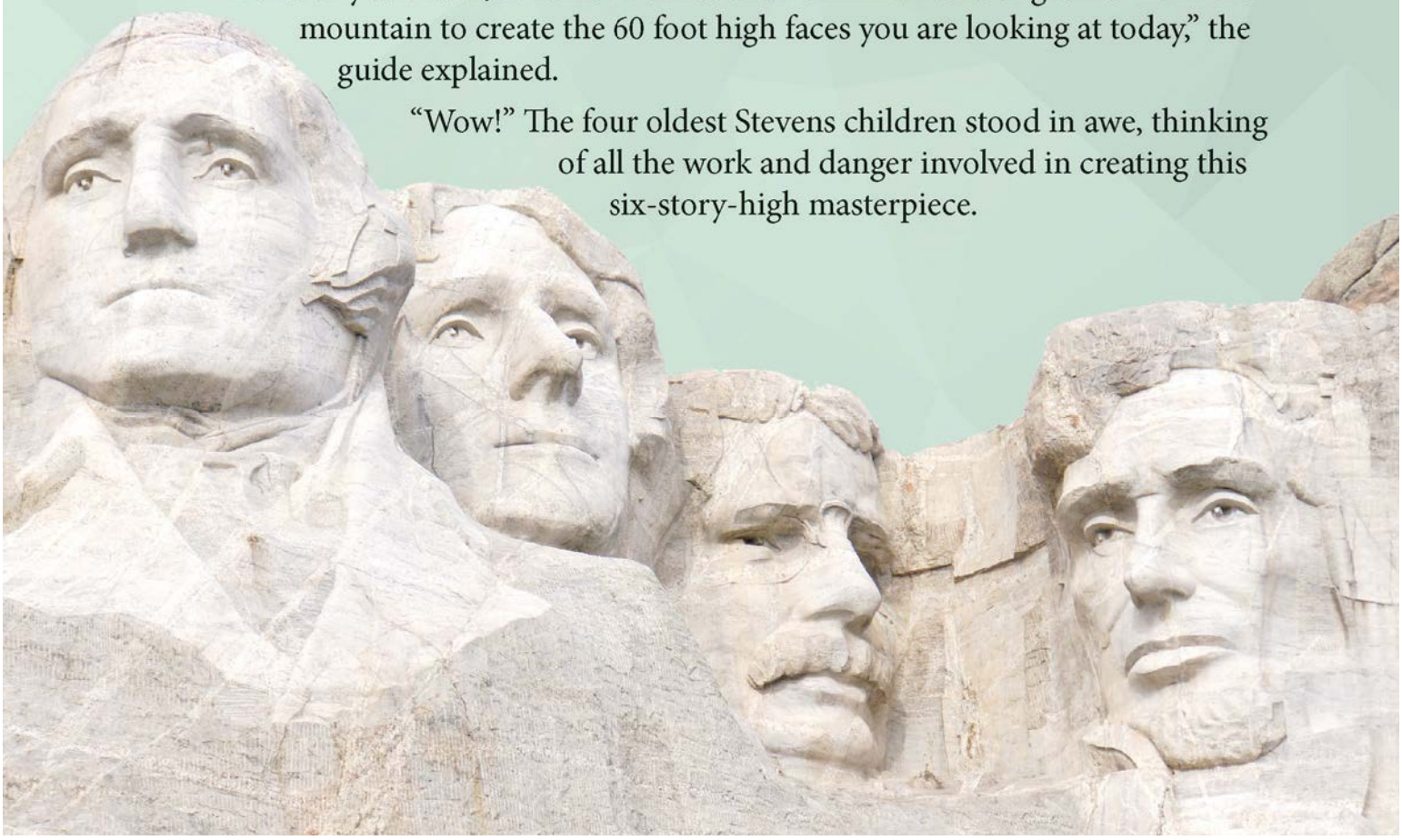
"Yes, you are correct, Charlotte," Mom smiled with encouragement, "and now that the dishes are done, and our picnic is packed, who's ready to go see Mount Rushmore?"

All five kids squealed with delight and headed to the van. Charlie and Hairo grabbed the cooler, which held their lunch, and loaded it into the back of the van.

Arriving at Mount Rushmore, the family stood in awe on the observation deck and listened as the tour guide told them how this national treasure came to be.

"In 1927, sculptor Gutzon Borglum began work on Mount Rushmore National Memorial. The original plan was to carve the presidents down to their waists. However, this proved to be a problem, as the granite on the lower part of the mountain was not suitable for carving. The work was extremely difficult, but not one worker was killed or permanently injured while carving the presidents. Seated in special steel-framed seats, and fastened with two safety straps each, the workers were lowered down from the top of the mountain. More than 90% of Mount Rushmore's stone was removed using dynamite, and it took until 1941, fourteen years later, to remove almost half a million tons of granite from the mountain to create the 60 foot high faces you are looking at today," the guide explained.

"Wow!" The four oldest Stevens children stood in awe, thinking of all the work and danger involved in creating this six-story-high masterpiece.



Name_____

Exercise 1

Day 56

Math Facts Review!

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

Let's Practice!

As you remember, we have learned to multiply two digit by one digit numbers. We have also learned to carry like this:

+1 group of 10

```
  1 2
x   9
-----
1 0 8
```

Let's review this concept.

```
  12      22      29
x  3    x  5    x  3
----    ----    ----
```

```
3 2   factor
x 6   factor
      product
```

Do you remember the parts of a multiplication problem? Solve the problem and trace the words.

Review!

How much money?

_____

Name_____

Exercise 1 Day 56

Round:

to the nearest 10 23 _____

to the nearest 100 587 _____

to the nearest 1,000 4,363 _____

Put each digit in the proper place to show its value.

	Thousands	Hundreds	Tens	Ones
4,890				
2,743				
7,000				
9,321				

Write the missing numerals.

I, ____, III, ____, V, VI, VII, ____, IX, ____, XI, _____

Name_____

Exercise 2

Day 57

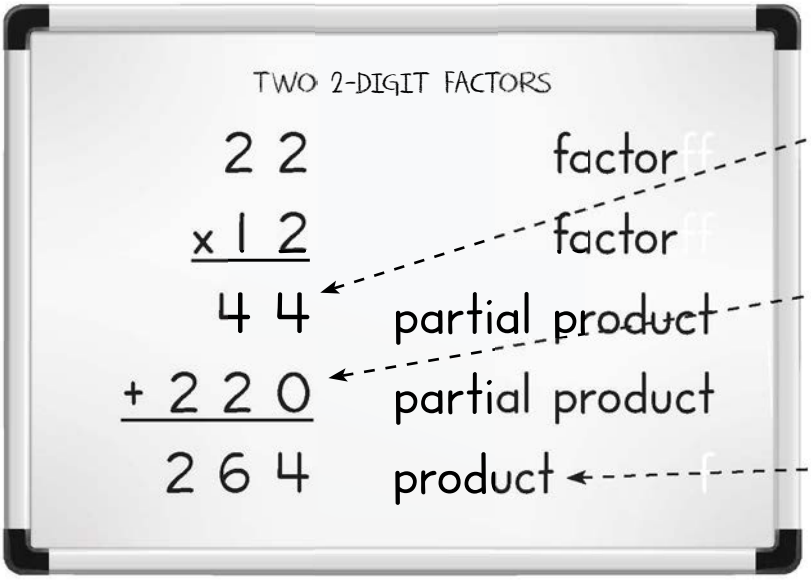
Math Facts Review!

x	1	2	3	4	5
10					
11					
12					

The answer to a multiplication problem is called the _____.

New Concept

When Mount Rushmore was being designed and built, the workers used many helpful math concepts. One of these was multiplication of large numbers. In our last exercise, we reviewed multiplication with carrying, and today we will add onto this concept. Study the example below.



1. First, multiply by the ones' digit of the bottom factor:

   22 x 2 = 44

2. Next, multiply the top factor by the tens' digit in the bottom factor:

   22 x 1(0) = 220

3. Last, add the two partial products.

There is a "Break it Down" card #3, which covers this concept, located in the appendix. Find it, cut it out, and laminate it before moving on with the exercise.

Name_____

Exercise 2 Day 57

Let's Practice!

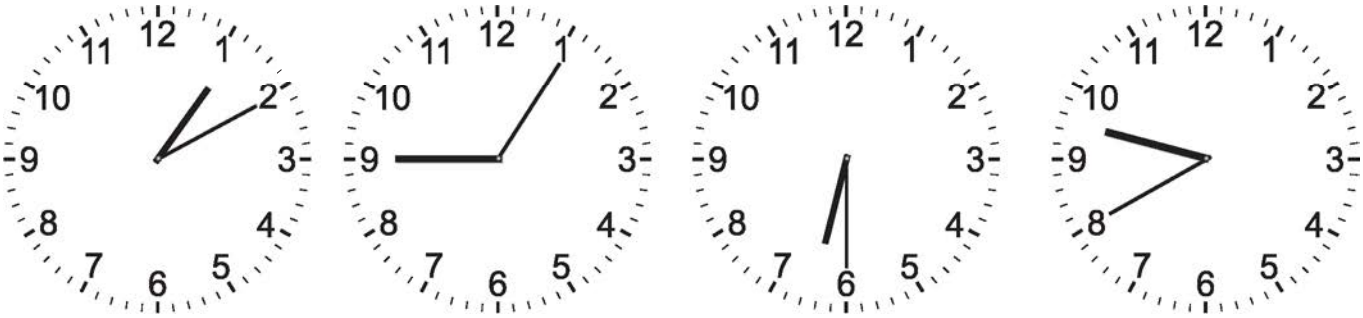
Now you try it!

12	23	33	43
x 14	x 23	x 22	x 21

Review!

421	371	619	310
539	410	- 327	- 266
+ 210	+ 172		

Cross out the clocks with the wrong times.



1:10 1:45 6:30 9:08

Name_____

Exercise 3 Day 58

Math Facts Review!

x	5	6	7	8	9
4					
6					
8					

Let's Practice! Work through each problem carefully and narrate what you are doing through each step. Use your Break it Down card if you need help.

$$\begin{array}{r} 23 \\ \times\ 20 \\ \hline \end{array} \qquad \begin{array}{r} 43 \\ \times\ 12 \\ \hline \end{array} \qquad \begin{array}{r} 10 \\ \times\ 93 \\ \hline \end{array}$$

Watch for carrying!

$$\begin{array}{r} 23 \\ \times\ 6 \\ \hline \end{array} \qquad \begin{array}{r} 57 \\ \times\ 2 \\ \hline \end{array} \qquad \begin{array}{r} 231 \\ \times\ 3 \\ \hline \end{array}$$

Review!

$6\overline{)18}$ $\qquad$ $8\overline{)24}$ $\qquad$ $5\overline{)15}$

Name_____

Exercise 3 Day 58

Number these from least to greatest.

_____ peck
_____ gallon
_____ bushel

_____ year
_____ day
_____ hour
_____ minute

_____ pound
_____ ounce
_____ ton

Draw each one.

line

segment

ray

angle

Name_____

Exercise 4 Day 59

Math Facts Review!

x	5	6	7	8	9
4					
6					
8					

Let's Practice and Review! Multiply each one.

$$\begin{array}{r} 13 \\ \times\ 21 \\ \hline \end{array} \qquad \begin{array}{r} 43 \\ \times\ 21 \\ \hline \end{array} \qquad \begin{array}{r} 90 \\ \times\ 6 \\ \hline \end{array} \qquad \begin{array}{r} 64 \\ \times\ 4 \\ \hline \end{array}$$

Word Problems:

1. If the boys stacked 15 rocks, that were 4 inches thick, on top of each other, how tall would their pile be? They would need Dad to help them!

2. The family drove for 8 hours. If they drove 60 miles each hour, how many miles did they drive?

Solve:

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

$6\overline{)12}$ $\qquad$ $2\overline{)16}$ $\qquad$ $4\overline{)20}$

Name_____

Exercise 5 Day 60

Hands ON!

Narrate the processes shown on Break It Down cards 1–3.

Research and Answer!

1. How old is Mount Rushmore?

2. Are the faces the same size?

3. How tall is Mount Rushmore?

4. Who was the designer?

Relationship Between Fractions, Decimals, and Percents

Lesson 24

This story was so interesting! Charlotte wished Charlie was here to hear it; she decided to tell him the story when he got home.

"What happens next? What happens next?" Charlotte asked.

"Wait a few minutes, Charlotte. Let me continue the story," Mom responded, smiling.

"Oooh! I can't wait to hear the next part!" Natty clapped her hands, and Ella giggled and clapped her hands, too.

Mom paused and studied her oldest daughter's face. Something in Charlotte's face tugged at her heart with memories. She clearly remembered being this age. Everything seemed to have changed overnight for her, just as it was for this daughter. She remembered the battle of emotions as she realized that she was turning into a young lady. As Mom studied Charlotte's face, she recognized this familiar inner battle.

Charlotte sat up straight and thought hard. "Mom, in some ways, I'm like the girl in this story. Sometimes I say things that I don't mean to say. I hear words come out of my mouth and wish I could grab them before they reach anyone's ears!" Charlotte sighed and leaned back. The hurt look on Natty's face drifted back across her mind, and she sighed again.

Mom smiled a little and squeezed Charlotte's hand. "What do you think the reward is, in this story? Do you think it is money?" The girls looked at each other and shook their heads, no.

"No, I don't think it's money. But I'm not sure what it is though," Natty said thoughtfully.

Proverbs 22:1

A good name (an honorable character) is rather to be chosen than great riches, and loving favor rather than silver and gold.

Name_____

Exercise 1 Day 116

Mental Math Review!

500 + 200 =

70 + 70 =

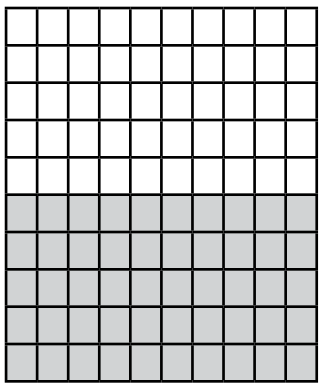
800 + 100 + 100 =

Let's Practice a New Concept!

We have learned that decimals and fractions express parts of a whole. Today, we will discover percents. You can think of decimals, fractions, and percents as being three siblings, because they are all related to each other! Where decimals and fractions may express many different fractional parts, percents always express hundredths. For example, a quarter is expressed $.25 (decimal), $\frac{25}{100}$ (fraction), and 25% as a percent. (The symbol "%" means percent.)

Over the next two exercises, you will be using your special charts to help you understand the relationship between fractions, decimals, and percents. First, follow these directions. **Remove your Fraction/Decimal Chart #3 from the appendix.** Laminate your chart and use a washable marker to do the following exercise. Show these fractions, decimals, and percents on your Fraction/Decimal Chart #3.

- ☑ $\frac{50}{100}$
- ☐ $\frac{30}{100}$
- ☐ $\frac{15}{100}$
- ☐ $\frac{82}{100}$
- ☐ $\frac{56}{100}$
- ☐ $\frac{67}{100}$
- ☐ $\frac{9}{100}$
- ☐ $\frac{42}{100}$

What it looks like	Fractional	Decimal	Percent
	$\frac{50}{100}$	0.50	50%

Name_____

Exercise 1 Day 116

Fractions, decimals, and percents are three ways to name part of a whole. All three have numerators and denominators.

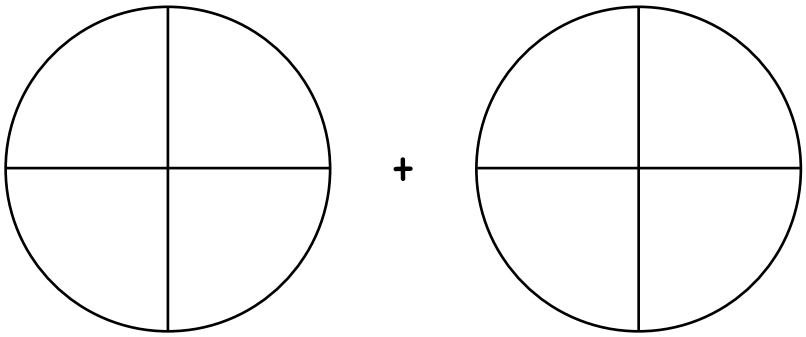
For instance, in the chart above, $\frac{50}{100}$ shows 50 parts of 100. The decimal 0.50 is read 50 hundredths and shows 50 parts of 100. In the last column, percent means hundredths, so 50% also means 50 parts of 100.

More Practice:

Draw a circle and shade 25% of it. What decimal part of the circle did you shade? _____

Solve the problem and shade the fraction circles to show the problem.

$\frac{1}{4} + \frac{3}{4} =$



Name_____

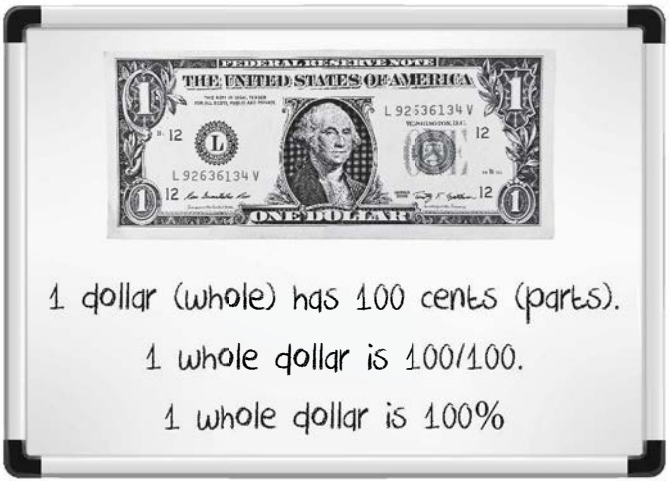
Exercise 2 Day 117

Math Facts Review!

Write your 9s, 11s, and 12s on a separate sheet of paper.

Multiply:

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



Let's Practice!

Write each amount as a decimal, fraction, and percent. The first one is done for you.

$.50

$\frac{50}{100}$

50%

_____

_____

_____

_____

_____

_____

Name_____

Exercise 2 Day 117

_____ _____ _____

_____ _____ _____

_____ _____ _____

After solving the above problems, show them on your chart 3. Narrate to your teacher what you are doing.

Review!

$ 472.98	$ 836.94	$ 550.61
+ 51.62	- 81.50	- 177.82

Name_____

Exercise 3 Day 118

Copywork! Copy each section and explain/show your teacher what each concept means. You may use whatever manipulatives you need.

Fractions, decimals, and percents are three ways to name part of a whole. All three have numerators and denominators.

_____

_____

_____

1 dollar (whole) has 100 cents (parts). 1 whole dollar is $\frac{100}{100}$.
1 whole dollar is 100%

_____

_____

When reading mixed numbers, such as $2\frac{1}{2}$, we read the whole number first, followed by the word "and." Lastly, we read the fraction. (two and one half)

_____

_____

_____

The larger the denominator, the smaller the fraction.

_____

_____

Name_____

Exercise 4 Day 119

Math Facts Review!

x	4	10	8	3	11	6	12
6							
7							
8							

Let's Practice! Use charts 1, 2, and 3 to show the following decimals, fractions, and percents.

- ☐ 0.8
- ☐ 25% (remember % means hundredths)
- ☐ 0.10
- ☐ 85%
- ☐ $\frac{75}{100}$
- ☐ 0.63
- ☐ 50%
- ☐ $\frac{50}{100}$
- ☐ $\frac{3}{10}$

Word Problems:

1. Grandpa Peter asked Charlie and Hairo to dig fence post holes on the farm. He needed twenty holes dug, and he told the boys that he would pay them $5 per hole. How much did the boys make on this job?

2. When the boys came home from Grandpa's farm, they were excited to divide the money evenly between the two of them. How much did they each earn?

Draw a line for each length.

6 cm ➢

$2\frac{1}{4}$ inches ➢

$5\frac{5}{8}$ inches ➢ $3\frac{1}{2}$ cm ➢

Name_____

Exercise 5 Day 120

Let's Practice!

Use charts 1, 2, and 3 to show the following decimals, fractions, and percents. Remember that "%" means percent.

- ☐ 0.6
- ☐ 15%
- ☐ .20
- ☐ 35%
- ☐ $\frac{35}{100}$
- ☐ 0.82
- ☐ 30%
- ☐ $\frac{25}{100}$
- ☐ $\frac{2}{10}$
- ☐ $\frac{62}{100}$

Write each amount as a decimal, fraction, and percent. The first one is done for you.

$.75

$\frac{75}{100}$

75%

_____

_____

_____

_____

_____

_____

Review of All Decimal Concepts

Lesson 36

REMINDER: When we write the value of a dime, we write \$.10, and we know that this means ten cents. We know that one dime is $\frac{1}{10}$ of a dollar because there are 10 dimes in a dollar.

The "." in \$.10 is called a decimal. Whenever you see a decimal, it is another way of writing a part of a whole or a fractional part.

In decimal place value, the place to the right of the decimal is the tenths place.

The second place to the right of a decimal is the hundredths place. For example, we write the worth of a quarter, \$.25 because it is 25 cents or $\frac{25}{100}$ of a dollar.

\$.25

Name_____

Exercise 1 Day 176

Copywork:

In decimal place value, the place to the right of the decimal is the tenths place.

The second place to the right of a decimal is the hundredths place. For example, we write the worth of a quarter, \$.25 because it is 25 cents or $\frac{25}{100}$ of a dollar.

When we add or subtract decimals, we need to line up the decimal points.

0.3 is read three tenths

Name_____

Exercise 1

Day 176

0.03 is read three hundredths

_____

0.6 is read six tenths

_____

0.06 is read six hundredths

_____

Hands-on!

Teacher

Have the student(s) pile money (play or real) on the table. Use Fractions/Decimal/Percent Charts 1–3 to show individual coin's worth, or ask students to create amounts less than $1 to show on the charts. Discuss how money can be shown as fractions, decimals, and percents.

Name_____

Exercise 2 Day 177

Solve:

4.2 + 0.4 =

3.7 - 0.9 =

22.5 + 0.6 =

$31.81
- 19.82

$170.65
+ 817.91

$890.00
- 38.88

Using charts 1 and 2 write these as decimals and fractions.

- ☐ eight tenths
- ☐ three hundredths
- ☐ one tenth
- ☐ six hundredths
- ☐ fifty-three hundredths
- ☐ six tenths

Name_____

Exercise 3 Day 178

Copywork:

Fractions, decimals, and percents are three ways to name part of a whole. All three have numerators and denominators.

_____

_____

_____

$\frac{50}{100}$ shows 50 parts of 100. The decimal 0.50 is read 50 hundredths and shows 50 parts of 100. Percent means hundredths, so 50% also means 50 parts of 100.

_____

_____

_____

Use chart 3 to show these fractions as decimals and percents.

☐ $\frac{40}{100}$ ☐ $\frac{63}{100}$ ☐ $\frac{18}{100}$

☐ $\frac{85}{100}$ ☐ $\frac{22}{100}$ ☐ $\frac{78}{100}$

☐ $\frac{6}{100}$ ☐ $\frac{35}{100}$

Name_____

Exercise 4 Day 179

Write each amount as a decimal, fraction, and percent.

_____

_____

_____

_____

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_____

_____

_____

_____

Name_____

Exercise 4

Day 179

1 dollar (whole) has 100 cents (parts).

1 whole dollar is $\frac{100}{100}$.

1 whole dollar is 100%

_____

_____

_____

Use charts 1, 2, and 3 to show the following decimals, fractions, and percents.

- ☐ 0.6
- ☐ 0.78
- ☐ 40% (remember % means hundredths)
- ☐ 80%
- ☐ 0.20
- ☐ $\frac{75}{100}$
- ☐ 82%
- ☐ $\frac{7}{10}$

Name_____

Exercise 5

Day 180

Dad took the family out to the ice cream shoppe. Charlie asked for a 3 scoop cone of neapolitan. Hairo ordered a triple scoop of rocky road. Charlotte and Natty each wanted a double scoop cone of peaches & cream. Mom and Ella shared a 2 scoop cone of chocolate fudge. Dad ordered a "Monster" of rocky road, vanilla bean, and strawberry swirl.

1. What was the family's total spent?

2. How many scoops did they eat all together?

3. How much more did Dad's treat cost than Hairo's and Charlie's together?

4. How much more did Dad's and the boys' ice cream cost than Mom's and the girls' ice cream?

5. Have you ever eaten 6 scoops of ice cream?

That's all for now!