This free download includes three lessons from

Math 3

LightUnit 303

The course consists of ten LightUnit workbooks (301-310).

Following the lessons are corresponding pages from the Teacher's Guide.

Course description:

Sunrise Math 3 teaches new skills and concepts in incremental, continuously reviewed steps. Concepts are tested only after being reviewed for five days or more. Use Christian Light's Math Diagnostic Test to place students new to the curriculum.

Students learn both the U.S. and metric systems of measurement. Addition & Subtraction Flash Cards and Multiplication & Division Flash Cards are required. Division is introduced in LightUnit 306, and students memorize the tables for 0-9. By the end of the course, students will have memorized multiplication tables 0 through 10. Practical story problems relate to a theme (which varies with each LightUnit) such as insects, cooking, and the ocean.

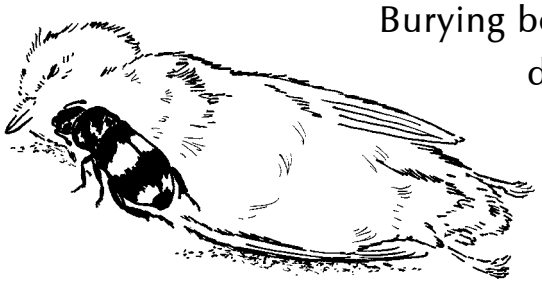
The course consists of ten LightUnit workbooks, a Teacher's Guide, Addition & Subtraction Flash Cards, and Multiplication & Division Flash Cards.

Contents

Mighty Little Creatures

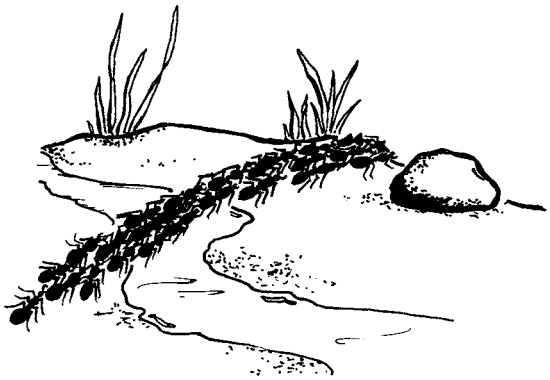
God's little creatures can sometimes do mighty things.

Monarch butterflies take a trip of 2,500 miles (4,000 kilometers) from their birthplace to their winter home.



Burying beetles, working in pairs, can dig a 'grave' and bury a dead mouse or sparrow in one night.

Army ants travel in columns many miles long. When they must cross a watery place, they build a 'bridge' of ants by holding on to one another. Other ants scurry across this bridge.



Most insects do not live long enough to teach their young. Where do insects get their knowledge? How do they learn to do these amazing things? God created them with the instinct to survive in a world full of much larger creatures.

As you work through Math 303, you will learn more about these mighty little creatures and our great God who designed them.

- ☐ Count by odd numbers from 1 to 11.
- ☐ Practice your I and ×10 flash cards for 5 minutes.
- ☐ Do Speed Drill 1 on page 61.
- ☐ Record your score in the graph on page 60.

Commas in Large Numbers

Large numbers need commas. Starting from the right side, put a comma after every three digits.

1,321 561,809 12,743

Remember: To put commas in a number, always start on the **right** side and count every 3 digits.

incorrect	*correct*
~~4 1 3 , 2 1~~	41,321
~~9 , 1 6 5 7~~	91,657

Cross out each number that has a comma in the wrong place.

1.	452,987	452,31	82,3591	10,285
2.	17,01	4,092	902,935	2,30

Reading Numbers With a Comma

A comma helps us read a number. When we get to the comma, we say "thousand." Follow the steps on the next page to read the numbers.

STEP 1 Read the number before the comma.

STEP 2 Say **"thousand"** for the comma.

STEP 3 Read the number after the comma.

2 1 4 , 3 5 9

two hundred fourteen **thousand,** three hundred fifty-nine

7 , 8 1 2

seven **thousand,** eight hundred twelve

2 9 , 0 5 9

twenty-nine **thousand,** fifty-nine

5 0 0 , 0 0 0

five hundred **thousand**

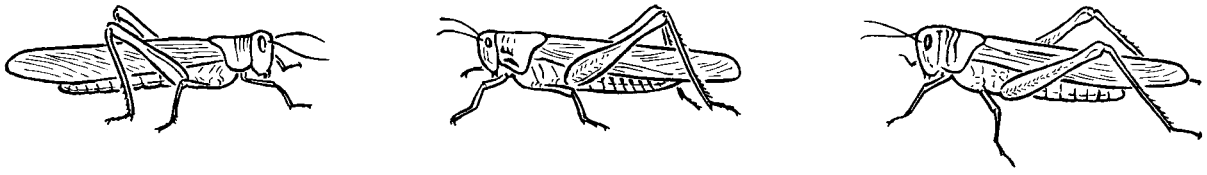
△ **Read the numbers to someone.**

3.	542,213	4,777	92,032	190,408	869,000
4.	303,789	6,000	22,000	200,000	123,456

We Remember

The legs of these grasshoppers make many angles. Circle the grasshopper whose back leg is nearest to a right angle.

5.



6. The farmer's friend, a tiny ladybug, can eat up to thirty aphids a day. On Monday Lori Ladybug ate 27 aphids, on Tuesday she ate 29, and on Wednesday she feasted on 30 of the garden pests. How many aphids did Lori eat in the three days?

Solution

\+ joining

− taking away
finding more or less

_____ _____

Find the sums.

7.	432	$1.89	416	7 6 2	274 68
	+527	+5.59	+ 96	+5	+415

Set up the problems and solve.

8. 378 + 820

Set up the problem

9. 819 – 653

Set up the problem

Insects destroy about one-tenth of the United States' food crop each year.

Write the digit for each place in the number.

		29,486	365,271	520,823
10.	tens	_____	_____	_____
11.	ones	_____	_____	_____
12.	hundreds	_____	_____	_____
13.	hundred thousands	_____	_____	_____
14.	thousands	_____	_____	_____
15.	ten thousands	_____	_____	_____

Mental Math . . .?

16. 500 – 100 = _____ 600 + 200 = _____ 100 + 600 = _____

17. 200 + 500 = _____ 800 – 700 = _____ 800 – 500 = _____

18. double 12 = _____ double 33 = _____ double 14 = _____

Circle *true* **or** *false.*

19. Congruent figures have the same size and shape.

true **false**

Fill in the blanks.

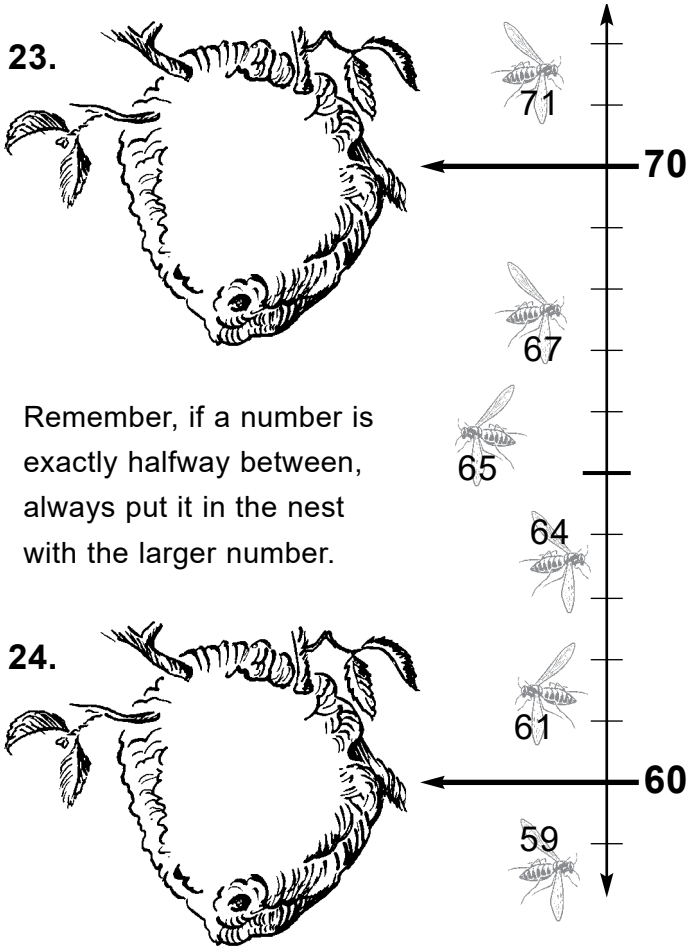
20. 1 quart = _____ cups

21. 1 meter= _____ centimeters

22. 1 yard= _____ feet

Put each hornet's number in the correct nest.

23.



Remember, if a number is exactly halfway between, always put it in the nest with the larger number.

24.

Fact Focus

25.

2	10	2	5	10	5	1	0	5	10
× 9	× 3	× 5	× 6	× 6	× 9	×10	× 0	× 2	×10

- ☐ Count by 25's from 125 to 250.
- ☐ Practice your J and ×10 flash cards for 5 minutes.
- ☐ Do Speed Drill 2 on page 61.
- ☐ Record your score in the graph on page 60.

Multiples (məl•tə•pəls)

Multiples of 2 are the same as counting by 2.

multiples of 2 → **2 4 6 8 10 12 14 16 18 20**

Multiples of 3 are the same as counting by 3.

multiples of 3 → **3 6 9 12 15 18 21 24 27 30**

Multiples of 10 are the same as counting by 10.

Multiples of 5 are the same as counting by 5.

Finish writing multiples of 10.

1. 10 ___ ___ ___ 50 ___ ___ ___ ___ ___

Finish writing multiples of 5.

2. 5 ___ ___ ___ 25 ___ ___ ___ ___ ___

Circle multiples of 4.

3.

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

Count by Fifty

Counting by 50 is saying or writing every fiftieth number.

Notice the pattern in counting by 50.

50 100 150 200 250

Continue counting by 50.

4. 300 _____ _____ _____ _____

5. 550 _____ _____ _____ _____

We Remember

Find the sums or differences.

6.

332	$7.94	926	624	876
+595	−3.42	−584	− 37	−467

Draw a ray that starts at point A.

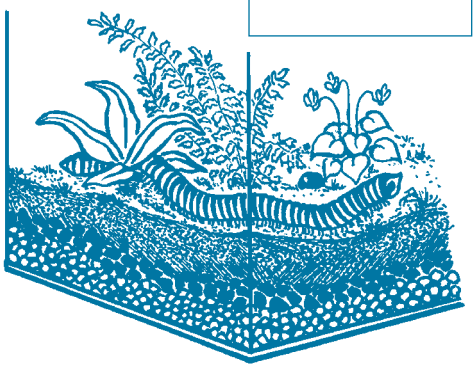
7. A •

Put a point on the ray that is 2 inches from point A. Name it point B.

Lesson 2

8. Andy had an African giant black millipede for a pet. It was one of the world's largest at 28 centimeters long. One day Andy's little brother slammed the lid of the terrarium on the giant millipede, cutting off 9 centimeters of him. How long was Andy's pet then?

Solution



+ joining

− taking away
finding more or less

_____ _____

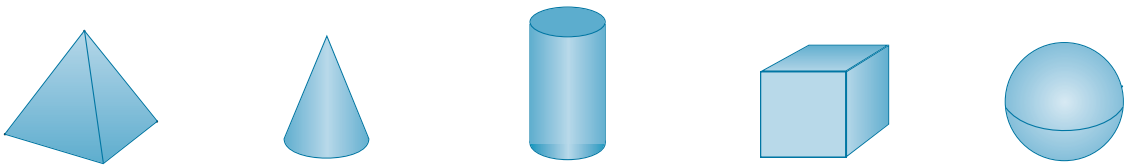
Write these numbers correctly with commas.

9. 632901 20587 8145 94056

_____ _____ _____ _____

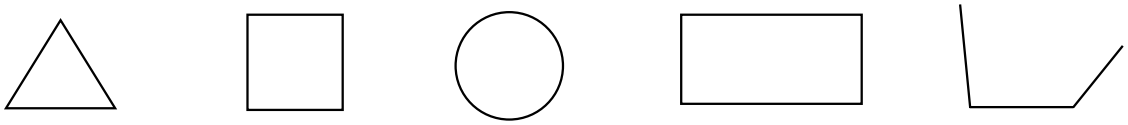
△ **Read the numbers above to your teacher.**

Write the names of the solids.



10. _____ _____ _____ _____ _____

Write the names of the polygons. Cross out the shapes that are not polygons. Mark one right angle of the rectangle.



11. _____ _____ _____ _____ _____

Mental Math . . .?

12. 100 + 400 = _____ 900 – 200 = _____ double 42 = _____

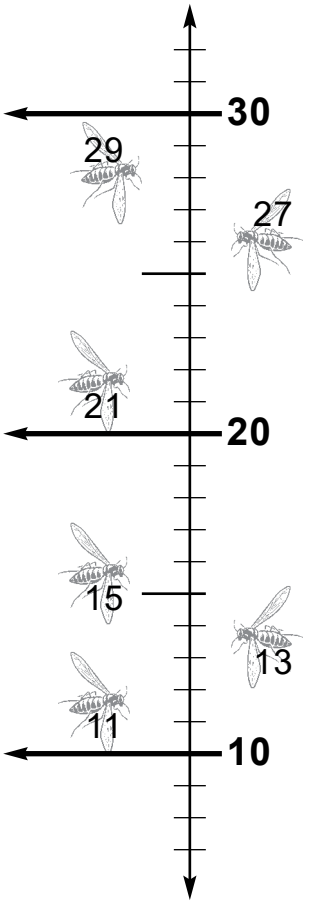
13. 700 + 100 = _____ 300 – 200 = _____ double 21 = _____

Put each hornet's number in the correct nest.

14.

15.

16.



Use your reference chart.
Circle *true* or *false.*

17. Intersecting lines cross each other.
true **false**

18. The diameter measures halfway across a circle.
true **false**

Fact Focus

19.

2	5	10	0	10	5	1	10	10	2
× 3	× 4	× 4	×10	× 5	× 7	× 2	× 8	× 0	× 7
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

- ☐ Count forward and backward by 3's to 36.
- ☐ Practice your K and ×5 flash cards for 5 minutes.
- ☐ Do Speed Drill 3 on page 62.
- ☐ Record your score in the graph on page 60.

Writing Thousands

Follow the steps below to write

five hundred thirteen **thousand,** six hundred eighty-four.

STEP 1

Write the number before **thousand.**

five hundred thirteen

STEP 2

Write a comma for **thousand.**

STEP 3

Write the number after **thousand.**

six hundred eighty-four

5 1 3 , 6 8 4

Write the numbers. Use commas when needed.

1. two hundred fifty-one thousand, six hundred fourteen _____
2. seventy-nine thousand, four hundred eighty-eight _____
3. four hundred sixty-one thousand, five hundred ninety-two _____
4. one hundred sixty-eight thousand, two hundred twelve _____
5. nine thousand, seven hundred twenty-four _____
6. eighty-nine _____

Count by Nine

Counting by 9 is saying or writing every ninth number. It will help you learn to multiply by nine.

To quickly count by 9's, add 10 and take one away.

Think! 9 + 10 = 19, 19 – 1 = 18
Think! 18 + 10 = 28, 28 – 1 = 27
Think! 27 + 10 = 37, 37 – 1 = 36

9 18 27 36 45 54 63 72 81 90

△ **Count aloud by 9 to 90 and back to 9. Do it twice. Try to do it the second time without looking.**

△ **Read the numbers aloud.**

7. 305,650 2,416 46,050 310 72

8. 603,540 3,002 50,309 607

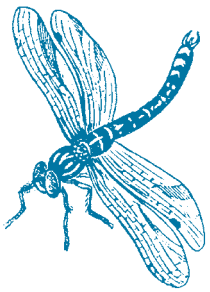
△ **Count by halves on your ruler to 12.**

Mayflies live only a few hours. Termites may live for 50 years.

We Remember

9. A dragonfly lives nearly 730 days in the water. Then it flies out to eat mosquitoes and other insects for 31 days. How many more days does the dragonfly live in water than in the air?

Solution



\+ joining

– taking away
finding more or less

Lesson 3

Write the sums or differences.

10.

861	298	944	232	67
−488	+356	−556	436	15
			+123	82
				+43

Cross out each number that has a comma in the wrong place.

11. 579,4943 142,30 76,231 5,903

Write multiples of 3.

12. ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

Expand the number.

13. 726,519 = _____

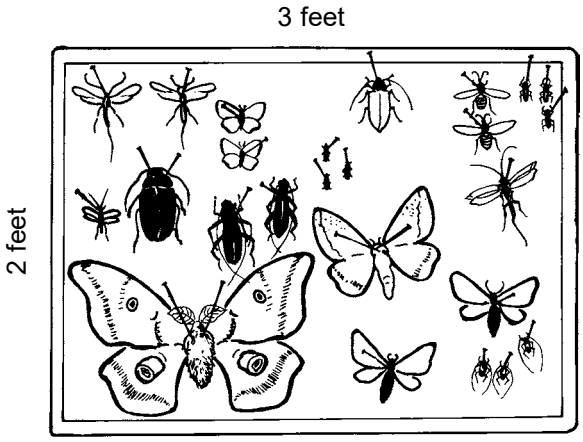
Write *true* **or** *false.*

14. Reversing the order of the factors changes the product. _____

example: 5 × 9 and 9 × 5

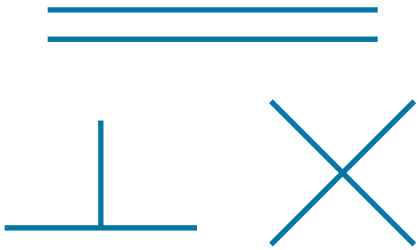
Karla used heavy cardboard for her insect collection. Write a number sentence and find the perimeter.

15. _____



Circle the lines that are parallel.

16.



Mental Math . . . ?

17. 300 – 200 = _____ 400 + 400 = _____ 12 + 5 = _____

18. 900 – 600 = _____ 300 + 400 = _____ 23 + 6 = _____

Answer each side.
Then write <, >, or =.

19. 9 + 2 ? 10 – 9

_____ ☐ _____

20. 1 × 34 ? 7 × 5

_____ ☐ _____

21. 6 + 8 ? 12 – 7

_____ ☐ _____

Write the tens or hundreds that come before and after.

22. _____ 58 _____

23. _____ 376 _____

Circle the correct symbol.

24. Three days are >, < one week.

25. Two hundred centimeters are >, < than one meter.

Circle the greatest amount. Underline the least amount.

26. $8.03 $2.50 $306.01 $.04 $4.00 $.65

Fact Focus

27.

2	10	5	2	1	5	2	10	5	0
× 4	× 1	× 5	× 6	× 1	× 8	× 8	× 7	× 3	× 4
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Introduction

CLE Sunrise Math is built on the thesis that most children can learn, understand, and master mathematics concepts. It seeks to relate math to everyday life and to make it practical. Mathematics should help students achieve the ultimate goal—serving and bringing glory to God.

CLE Sunrise Math introduces concepts in incremental steps. This allows the student to master each increment of a skill before advancing to the next step. Thus he does not face entire lessons or chapters on a single concept but meets several simple concepts simultaneously. Each increment easily becomes a part of his "big picture," not only because it is small, but also because it fits with what he has already learned.

The only way a student will retain what he has learned is by consistent, systematic review. CLE Math uses continuous review. Instead of having a grand review at the end of the year, much of each day's work is review. The goal is mastery, not only exposure.

Course Materials

Here is what is needed to teach this course. Items in italics are available from CLE.

Teacher:

Teacher's Guide for Math 300 (this volume)

Addition/Subtraction Flash Cards (See "Flash-Card System" in this introduction)

Multiplication and Division Flash Cards

For each student:

LightUnits 301-310

Elementary Math Reference Chart for each student or small groups of students

Rulers with centimeters, inches, yards and meters

The LightUnits

Each LightUnit in Math 300 features a theme. The theme will help your students to discover some of the many ways math is used in our world. Page 1 of each LightUnit introduces the theme.

Lessons 1-16

1. **Title Bars.** Each lesson begins with a title bar that directs students to do their daily counting exercises, flash-card practice, and speed drill.

   Flash-Card System. Sunrise Math 300 comes with a built-in flash-card system that tells you when and how often to practice math facts.

   CLE Addition/Subtraction Flash Cards are coded with the letters *A* through *M.* If you use your own flash cards, see Appendix E for the facts in each group. CLE Multiplication and Division Flash Cards are double-sided: multiplication on one side, the matching division fact on the other side. Instructions in the title bar of each lesson tell students which cards to practice.

   Speed Drills. Since fact learning is essential for mastery in math, Sunrise Math includes daily speed drills. You will need to provide a timer or other method for timing. Students have one minute to complete as many facts as they can. They then score their drill and record their score on the graph near the end of the LightUnit.
2. **What's New?** New material is introduced at the beginning of each lesson, usually right after the title bar activities. Students should be able to work through most new material on their own with occasional help from the teacher. A large Teacher Check symbol indicates that the material is more difficult and that you may want to formally teach that lesson.

   Refresher Lessons. This symbol indicates that the concept was originally taught in Math 200. Students may benefit from having it retaught.
3. **We Remember.** A daily review designed to ensure mastery of previously taught skills and concepts. Students should need little help in this section.
4. **Just for Fun.** These occasional enrichment activities expose students to new concepts. There is no review or testing of these activities—they're *Just for Fun.*

Lesson 17: *Just for Fun*

The last lesson in each LightUnit is designed to broaden the student's exposure to math. Teachers who need to shorten the school year may opt to skip these lessons.

Quiz 1, Quiz 2, and LightUnit Test

Sunrise Math tests concepts only after they have been reviewed for five days or more. Tests and quizzes are cumulative.

Symbols Used in the LightUnits

 Teacher Check. Used before quizzes and tests, and anywhere else the child must obtain the teacher's initials before proceeding.

△ Teacher's Aide Check. Used with exercises that need to be checked by the teacher or teacher's aide. The child may continue working beyond this symbol even though the exercise has not yet been checked.

☆ Optional Activity. The student should check with the teacher for instructions as to whether to do exercises marked with a star.

Refresher Lesson. This concept was taught in Math 200 and appears again in Math 300.

 Story Problem.

 We Remember—The daily review section continuously reviews skills and concepts.

Fact Focus —New or recently introduced facts.

Mental Math...?—Exercises in which student works mentally and writes down only the answers.

 Just for Fun—Optional activities, usually found in Lessons 5, 10, and 17.

Grading a LightUnit

To obtain a final LightUnit grade, average the two quiz grades and any other optional grades. Add this average to the LightUnit Test grade and divide by two. This average will be the final grade for the LightUnit.

Example: Quiz 1 – 96%
Quiz 2 – 98%
Average – 97%
Test score – 93%
Average – 95%
LightUnit score is 95.

Scores Below 80. If a student scores 75-79% on a LightUnit Test, he may review the concepts he is weak in. Verify that he knows the material by quizzing him or giving a remedial assignment.

If a student scores 70-74%, have him restudy for the test and take the Alternate LightUnit Test located in Appendix C.

If a student scores 70% or below, have him do a thorough review of the LightUnit before taking the Alternate LightUnit Test or have him redo the entire LightUnit and then take the Alternate LightUnit Test. For both scenarios, if the student scores between 75-100% on the Alternate LightUnit Test, record the score for the LightUnit as 80%.

If all controls are followed but the student consistently fails to achieve 80%, consider underlying causes. What is the student's natural ability? Can he be expected to achieve 80% or above? These students may need to be evaluated by a trained person or to have one-on-one assistance.

The Elementary Math Reference Chart

The *Elementary Math Reference Chart* is a portable glossary which has been durably laminated to withstand years of use. When your second through sixth grade students forget what an obtuse angle is, or how many cups are in a quart, they can quickly find this information on their reference chart. The chart is packed full of definitions, diagrams, equivalent measures, geometry, common abbreviations, etc. It even contains a full set of multiplication facts through the 9's. Students can work much more independently when they can look up information by themselves. The reference chart is a tool that will help them achieve this goal.

The Appendixes

Take time to become familiar with the appendixes in this teacher's guide.

Appendix A: Math 200 Skills Index tells you where in Math 200 each skill is introduced.

Appendix B: Math 300 Scope and Sequence gives an overview of the whole course. Many states

require homeschoolers to submit a scope and sequence of the course they plan to study.

Appendix C: Alternate LightUnit Tests cover the same concepts as the regular LightUnit tests, but in a different order. They may be photocopied and used when a student needs to retake a test for any reason.

Appendix D: Math 300 Skills Index tells you where in Math 300 each skill is introduced.

Appendix E: Math 300 Flash-Card System divides the basic addition and subtraction facts into groups coded by letters of the alphabet. CLE's Addition/Subtraction flash cards are pre-coded. If you are using your own set, use this appendix to code your cards so that they are ready for each day's suggested flash-card practice.

Appendix F: Extra Practice Sheets provide reinforcement for concepts reviewed in LightUnit 301.

Appendix G: Extra Activity Sheets. These pages provide the answers for the extra activity sheets included in LightUnit 301.

Appendix H: Math Reference Chart. The *Elementary Math Reference Chart* is reproduced here for the teacher's benefit.

Math 303

Lesson 1 — pages 2-5

Lesson Preparation

- *1 and x10 Flash Cards*

Drill

- Count odd numbers from 1 to 11.
- Do *1 and x10 Flash Cards*.
- Do Speed Drill 1 and record scores.
  Explain how to record scores on the graph.

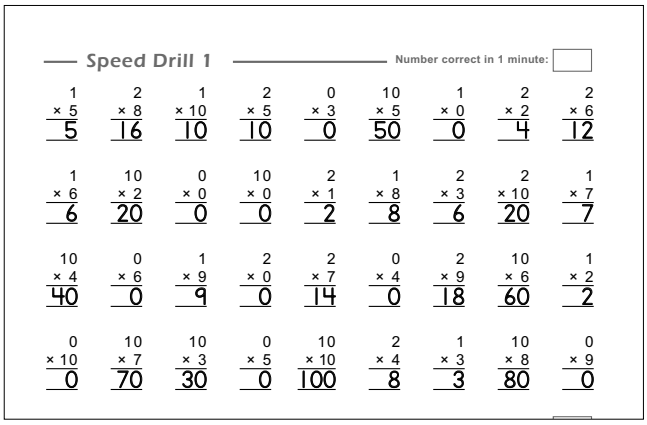
Working in the LightUnit

What's New?

➔ **Commas in large numbers.** For numbers with many digits, we separate the digits into groups of three. This makes large numbers easier to read.

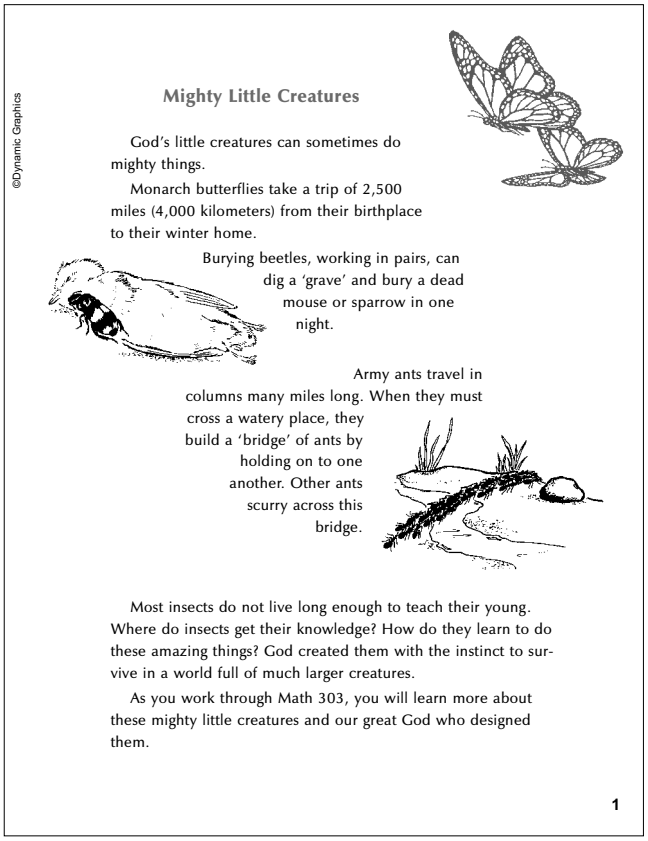
Point out that we read from *left to right,* but we put commas in large numbers from *right to left*.

➔ **Reading numbers with commas.** Since we won't be studying numbers larger than 999,999 for a while, teach students to call the comma *thousand.* If they treat the digits to the left of the comma as a unit they should have no trouble reading large numbers. For example 302,427 would be read in three steps. First they would say *three hundred two.* Then they would say *thousand.* Then they would say *four hundred twenty-seven.*



Speed Drill 1 — Number correct in 1 minute: ____

1 × 5 = 5	2 × 8 = 16	1 × 10 = 10	2 × 5 = 10	0 × 3 = 0	10 × 5 = 50	1 × 0 = 0	2 × 2 = 4	2 × 6 = 12
1 × 6 = 6	10 × 2 = 20	0 × 0 = 0	10 × 0 = 0	2 × 1 = 2	1 × 8 = 8	2 × 3 = 6	2 × 10 = 20	1 × 7 = 7
10 × 4 = 40	0 × 6 = 0	1 × 9 = 9	2 × 0 = 0	2 × 7 = 14	0 × 4 = 0	2 × 9 = 18	10 × 6 = 60	1 × 2 = 2
0 × 10 = 0	10 × 7 = 70	10 × 3 = 30	0 × 5 = 0	10 × 10 = 100	2 × 4 = 8	1 × 3 = 3	10 × 8 = 80	0 × 9 = 0



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Mighty Little Creatures

God's little creatures can sometimes do mighty things.

Monarch butterflies take a trip of 2,500 miles (4,000 kilometers) from their birthplace to their winter home.

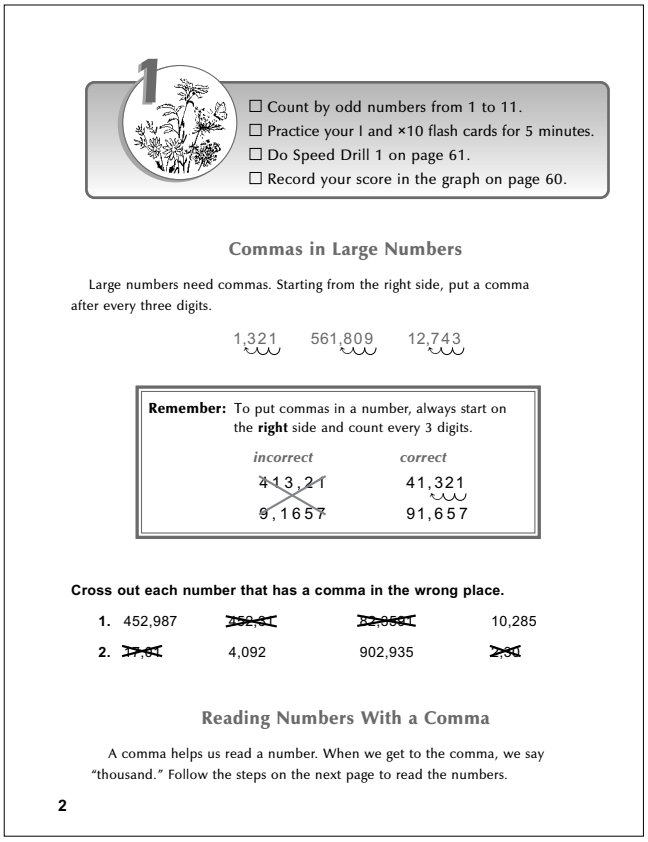
Burying beetles, working in pairs, can dig a 'grave' and bury a dead mouse or sparrow in one night.

Army ants travel in columns many miles long. When they must cross a watery place, they build a 'bridge' of ants by holding on to one another. Other ants scurry across this bridge.

Most insects do not live long enough to teach their young. Where do insects get their knowledge? How do they learn to do these amazing things? God created them with the instinct to survive in a world full of much larger creatures.

As you work through Math 303, you will learn more about these mighty little creatures and our great God who designed them.

1



1

- ☐ Count by odd numbers from 1 to 11.
- ☐ Practice your 1 and ×10 flash cards for 5 minutes.
- ☐ Do Speed Drill 1 on page 61.
- ☐ Record your score in the graph on page 60.

Commas in Large Numbers

Large numbers need commas. Starting from the right side, put a comma after every three digits.

1,321 561,809 12,743

Remember: To put commas in a number, always start on the **right** side and count every 3 digits.

incorrect	*correct*
~~413,21~~	41,321
~~9,1657~~	91,657

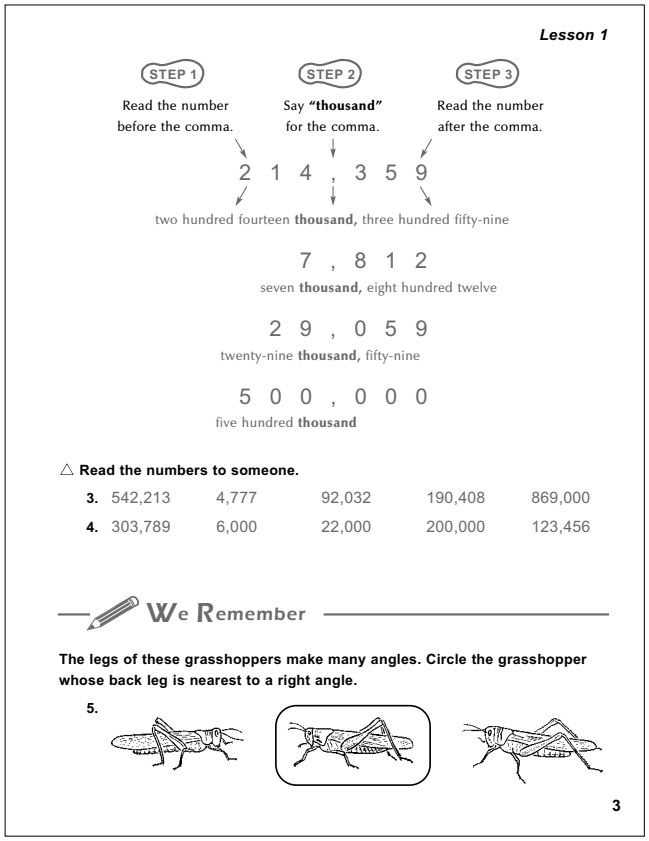
Cross out each number that has a comma in the wrong place.

1. 452,987 ~~452,9~~ ~~32,058~~ 10,285
2. ~~17,6~~ 4,092 902,935 ~~2,3~~

Reading Numbers With a Comma

A comma helps us read a number. When we get to the comma, we say "thousand." Follow the steps on the next page to read the numbers.

2



Lesson 1

STEP 1 Read the number before the comma. STEP 2 Say **"thousand"** for the comma. STEP 3 Read the number after the comma.

2 1 4 , 3 5 9

two hundred fourteen **thousand,** three hundred fifty-nine

7 , 8 1 2

seven **thousand,** eight hundred twelve

2 9 , 0 5 9

twenty-nine **thousand,** fifty-nine

5 0 0 , 0 0 0

five hundred **thousand**

△ **Read the numbers to someone.**

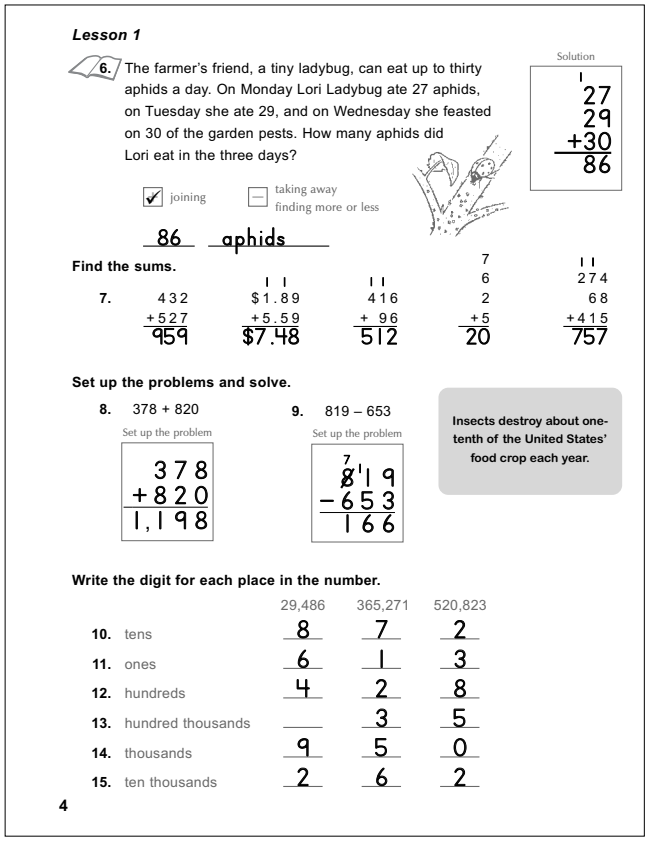
3.	542,213	4,777	92,032	190,408	869,000
4.	303,789	6,000	22,000	200,000	123,456

We Remember

The legs of these grasshoppers make many angles. Circle the grasshopper whose back leg is nearest to a right angle.

5.

3



Lesson 1

6. The farmer's friend, a tiny ladybug, can eat up to thirty aphids a day. On Monday Lori Ladybug ate 27 aphids, on Tuesday she ate 29, and on Wednesday she feasted on 30 of the garden pests. How many aphids did Lori eat in the three days?

☑ joining ☐ taking away finding more or less

Solution

```
  1
 27
 29
+30
 86
```

86 aphids

Find the sums.

7.	432	$1.89	416	7 6 2	274 68
	+527	+5.59	+ 96	+5	+415
	959	$7.48	512	20	757

Set up the problems and solve.

8. 378 + 820

Set up the problem

```
  378
+ 820
-----
 1,198
```

9. 819 – 653

Set up the problem

```
  7
 819
-653
-----
 166
```

Insects destroy about one-tenth of the United States' food crop each year.

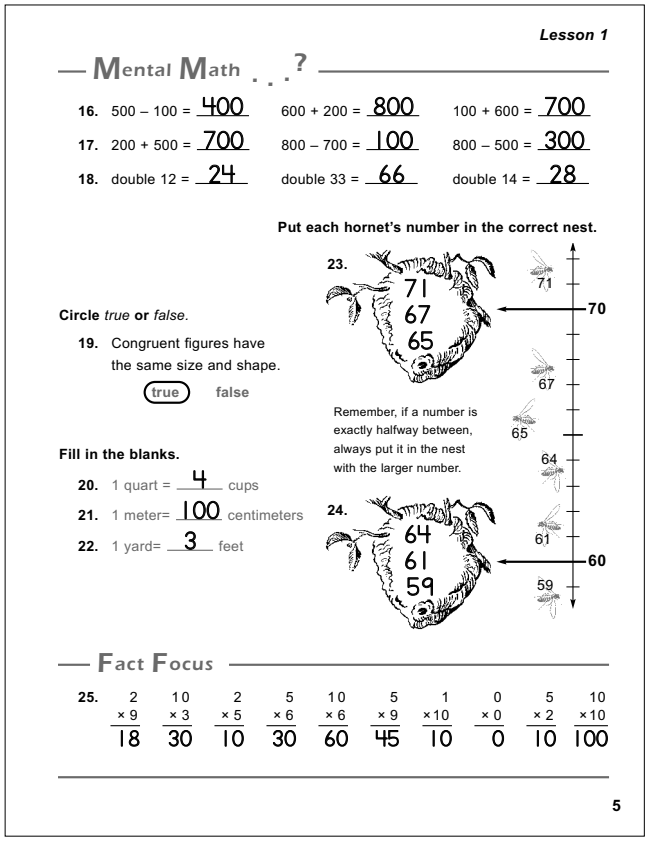
Write the digit for each place in the number.

		29,486	365,271	520,823
10.	tens	8	7	2
11.	ones	6	1	3
12.	hundreds	4	2	8
13.	hundred thousands		3	5
14.	thousands	9	5	0
15.	ten thousands	2	6	2

4

Helpful Hints

➔ Students with extra time might enjoy researching some of the many small creatures highlighted in this LightUnit. Do they know what distinguishes insects from other types of creeping crawlers?



Lesson 1

Mental Math . . .?

16.	500 – 100 = 400	600 + 200 = 800	100 + 600 = 700
17.	200 + 500 = 700	800 – 700 = 100	800 – 500 = 300
18.	double 12 = 24	double 33 = 66	double 14 = 28

Put each hornet's number in the correct nest.

23.

Circle *true* **or** *false.*

19. Congruent figures have the same size and shape.

(true) false

Remember, if a number is exactly halfway between, always put it in the nest with the larger number.

Fill in the blanks.

20. 1 quart = 4 cups

21. 1 meter= 100 centimeters

22. 1 yard= 3 feet

24.

Fact Focus

25.	2	10	2	5	10	5	1	0	5	10
	× 9	× 3	× 5	× 6	× 6	× 9	×10	× 0	× 2	×10
	18	30	10	30	60	45	10	0	10	100

5

Lesson 2 *pages 6-9*

Lesson Preparation

- *J AND X10 FLASH CARDS*

Drill

- Count by 25's from 125 to 250.
- Do *J AND X10 FLASH CARDS*.
- Do Speed Drill 2 and record scores.

Working in the LightUnit

What's New?

➔ **Multiples.** Explain that *multiples* is the fancy word for the list of numbers in a counting sequence.

➔ **Counting by 50.** Point out the pattern: fifty, a hundred, then its fifty, the next hundred, then its fifty, etc.

Speed Drill 2 — Number correct in 1 minute: ☐

2 + 3 = 5	3 + 0 = 3	4 + 7 = 11	5 + 3 = 8	9 + 5 = 14	3 + 4 = 7	7 + 7 = 14	4 + 5 = 9	1 + 3 = 4
1 + 4 = 5	7 + 3 = 10	7 + 9 = 16	1 + 1 = 2	6 + 4 = 10	0 + 7 = 7	3 + 6 = 9	9 + 8 = 17	7 + 8 = 15
4 + 9 = 13	7 + 0 = 7	5 + 6 = 11	7 + 2 = 9	5 + 7 = 12	6 + 6 = 12	6 + 1 = 7	8 + 7 = 15	6 + 2 = 8
8 + 3 = 11	6 + 8 = 14	2 + 5 = 7	0 + 2 = 2	3 + 9 = 12	5 + 8 = 13	8 + 6 = 14	9 + 6 = 15	4 + 8 = 12

61

2

- ☐ Count by 25's from 125 to 250.
- ☐ Practice your J and ×10 flash cards for 5 minutes.
- ☐ Do Speed Drill 2 on page 61.
- ☐ Record your score in the graph on page 60.

Multiples (məl•tə•pəls)

Multiples of 2 are the same as counting by 2.

multiples of 2 → 2 4 6 8 10 12 14 16 18 20

Multiples of 3 are the same as counting by 3.

multiples of 3 → 3 6 9 12 15 18 21 24 27 30

Multiples of 10 are the same as counting by 10.

Multiples of 5 are the same as counting by 5.

Finish writing multiples of 10.

1. 10 20 30 40 50 60 70 80 90 100

Finish writing multiples of 5.

2. 5 10 15 20 25 30 35 40 45 50

6

Lesson 2

Circle multiples of 4.

3.	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)

Count by Fifty

Counting by 50 is saying or writing every fiftieth number.

Notice the pattern in counting by 50.

50 100 150 200 250

Continue counting by 50.

4. 300 350 400 450 500

5. 550 600 650 700 750

We Remember

Find the sums or differences.

6.	332 + 595 = 927	$7.94 − 3.42 = $4.52	826 − 584 = 342	824 − 37 = 587	876 − 467 = 409

Draw a ray that starts at point A.

7. A B

Put a point on the ray that is 2 inches from point A. Name it point B.

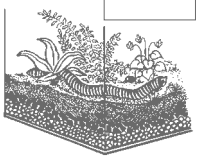
7

Lesson 2

8. Andy had an African giant black millipede for a pet. It was one of the world's largest at 28 centimeters long. One day Andy's little brother slammed the lid of the terrarium on the giant millipede, cutting off 9 centimeters of him. How long was Andy's pet then?

Solution

$$\begin{array}{r} {}^{1}\not{2}{}^{1}\not{8} \\ -\ 9 \\ \hline 19 \end{array}$$



☐ joining ☑ taking away finding more or less

19 centimeters

Write these numbers correctly with commas.

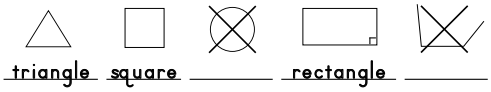
9.	632901	20587	8145	94056
	632,901	20,587	8,145	94,056

△ **Read the numbers above to your teacher.**

Write the names of the solids.

10. pyramid cone cylinder cube sphere

Write the names of the polygons. Cross out the shapes that are not polygons. Mark one right angle of the rectangle.



11. triangle square _____ rectangle _____

8

Lesson 3 *pages 10-13*

Lesson Preparation

- *K AND X5 FLASH CARDS*

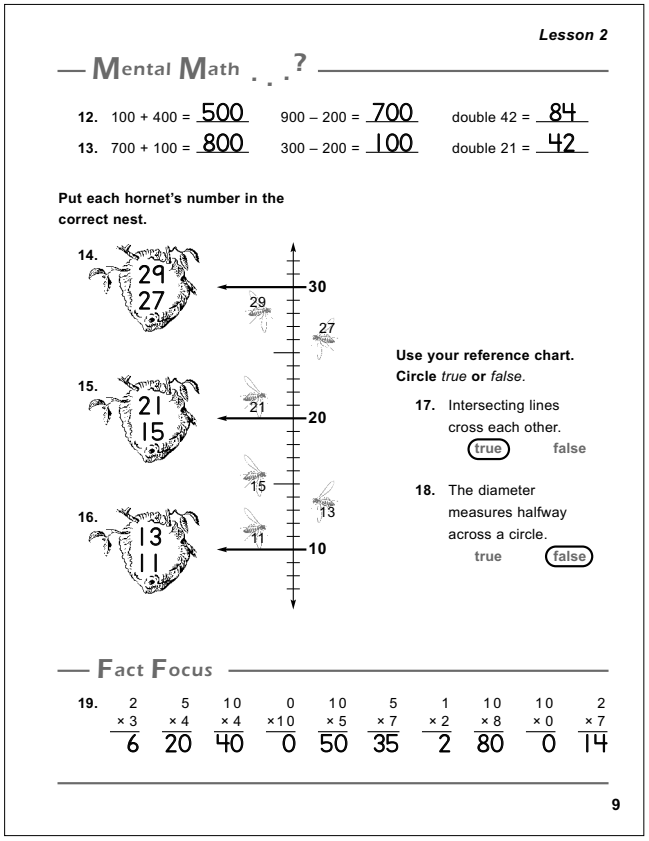
Drill

- Count forward and backward by 3's to 36.
- Do *K AND X5 FLASH CARDS*.
- Do Speed Drill 3 and record scores.

Working in the LightUnit

What's New?

➔ **Writing numbers that contain commas.** Remind students that whenever they hear or read the word *thousand* in a number, they should immediately write a comma. Again, they should write these larger numbers in three steps: for example, when reading *four hundred six thousand, two hundred twenty-seven* they should first write *406;* then they should write a comma; then they should write *227.*



Lesson 2

— Mental Math . . . ?

12. 100 + 400 = 500 900 – 200 = 700 double 42 = 84
13. 700 + 100 = 800 300 – 200 = 100 double 21 = 42

Put each hornet's number in the correct nest.

14. 29 27
15. 21 15
16. 13 11

30 20 10

Use your reference chart. Circle *true* or *false*.

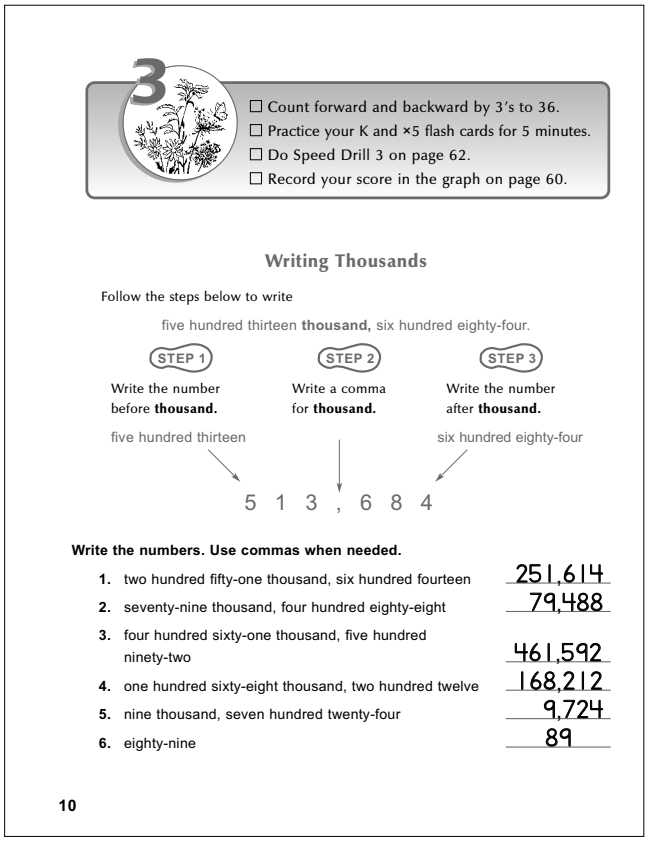
17. Intersecting lines cross each other. (true) false
18. The diameter measures halfway across a circle. true (false)

— Fact Focus

19.

2 ×3 = 6	5 ×4 = 20	10 ×4 = 40	0 ×10 = 0	10 ×5 = 50	5 ×7 = 35	1 ×2 = 2	10 ×8 = 80	10 ×0 = 0	2 ×7 = 14

9



3

- ☐ Count forward and backward by 3's to 36.
- ☐ Practice your K and ×5 flash cards for 5 minutes.
- ☐ Do Speed Drill 3 on page 62.
- ☐ Record your score in the graph on page 60.

Writing Thousands

Follow the steps below to write

five hundred thirteen **thousand,** six hundred eighty-four.

STEP 1: Write the number before **thousand.** five hundred thirteen

STEP 2: Write a comma for **thousand.**

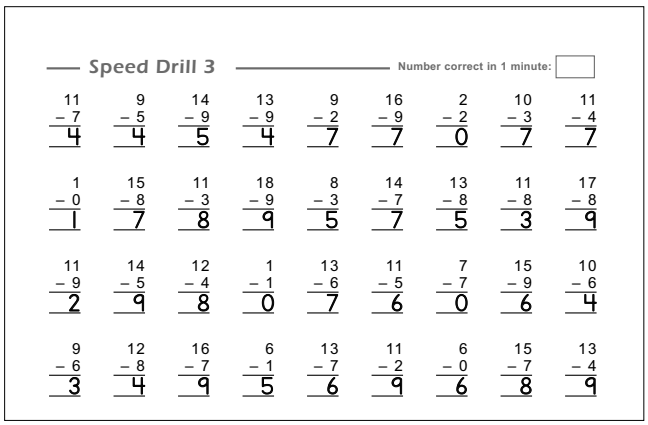
STEP 3: Write the number after **thousand.** six hundred eighty-four

5 1 3 , 6 8 4

Write the numbers. Use commas when needed.

1. two hundred fifty-one thousand, six hundred fourteen — 251,614
2. seventy-nine thousand, four hundred eighty-eight — 79,488
3. four hundred sixty-one thousand, five hundred ninety-two — 461,592
4. one hundred sixty-eight thousand, two hundred twelve — 168,212
5. nine thousand, seven hundred twenty-four — 9,724
6. eighty-nine — 89

10



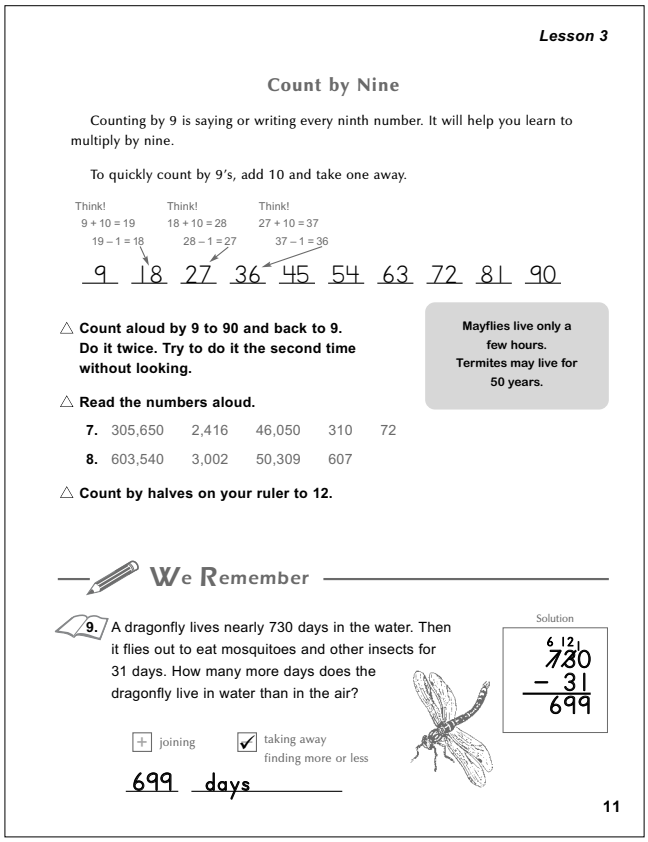
— Speed Drill 3 — Number correct in 1 minute: ☐

11 – 7 = 4	9 – 5 = 4	14 – 9 = 5	13 – 9 = 4	9 – 2 = 7	16 – 9 = 7	2 – 2 = 0	10 – 3 = 7	11 – 4 = 7
1 – 0 = 1	15 – 8 = 7	11 – 3 = 8	18 – 9 = 9	8 – 3 = 5	14 – 7 = 7	13 – 8 = 5	11 – 8 = 3	17 – 8 = 9
11 – 9 = 2	14 – 5 = 9	12 – 4 = 8	1 – 1 = 0	13 – 6 = 7	11 – 5 = 6	7 – 7 = 0	15 – 9 = 6	10 – 6 = 4
9 – 6 = 3	12 – 8 = 4	16 – 7 = 9	6 – 1 = 5	13 – 7 = 6	11 – 2 = 9	6 – 0 = 6	15 – 7 = 8	13 – 4 = 9

➔ **Counting by 9's.** Point out the pattern: Counting by nines is like counting by tens and dropping back one number each time.

Helpful Hints

➔ How familiar are your students becoming with their math reference charts? Encourage them to use them frequently. Perhaps point out a few of the interesting tidbits of information they can look up whenever they want.



Lesson 3

Count by Nine

Counting by 9 is saying or writing every ninth number. It will help you learn to multiply by nine.

To quickly count by 9's, add 10 and take one away.

Think! 9 + 10 = 19, 19 – 1 = 18 | Think! 18 + 10 = 28, 28 – 1 = 27 | Think! 27 + 10 = 37, 37 – 1 = 36

9 18 27 36 45 54 63 72 81 90

△ **Count aloud by 9 to 90 and back to 9. Do it twice. Try to do it the second time without looking.**

△ **Read the numbers aloud.**

7. 305,650 2,416 46,050 310 72

8. 603,540 3,002 50,309 607

△ **Count by halves on your ruler to 12.**

Mayflies live only a few hours. Termites may live for 50 years.

We Remember

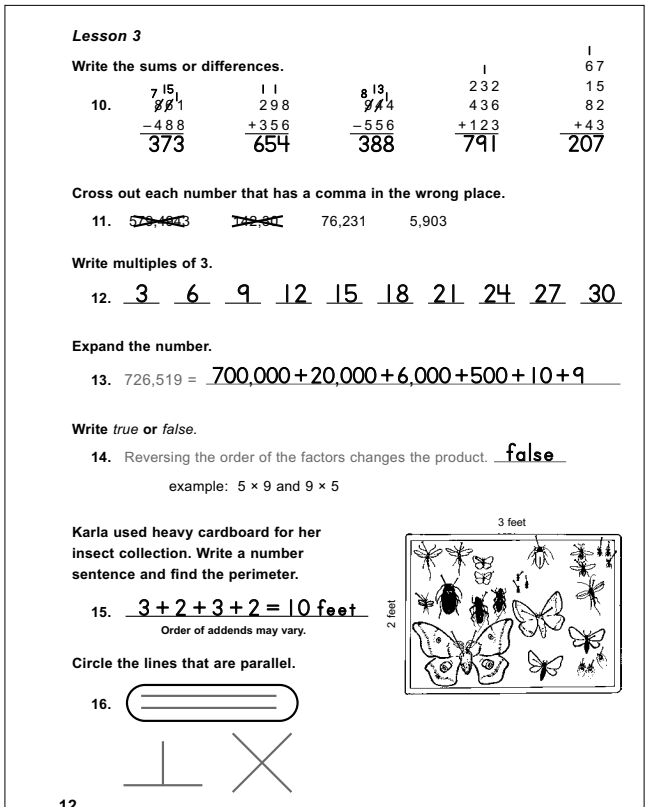
9. A dragonfly lives nearly 730 days in the water. Then it flies out to eat mosquitoes and other insects for 31 days. How many more days does the dragonfly live in water than in the air?

☐ joining ☑ taking away finding more or less

699 days

Solution: 730 − 31 = 699

11



Lesson 3

Write the sums or differences.

10.

881	298	914	232	67
−488	+356	−556	+123	15
373	654	388	791	+43
				207

Cross out each number that has a comma in the wrong place.

11. ~~579,463~~ ~~142,60~~ 76,231 5,903

Write multiples of 3.

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

Expand the number.

13. 726,519 = 700,000 + 20,000 + 6,000 + 500 + 10 + 9

Write *true* or *false*.

14. Reversing the order of the factors changes the product. false

example: 5 × 9 and 9 × 5

Karla used heavy cardboard for her insect collection. Write a number sentence and find the perimeter.

15. 3 + 2 + 3 + 2 = 10 feet

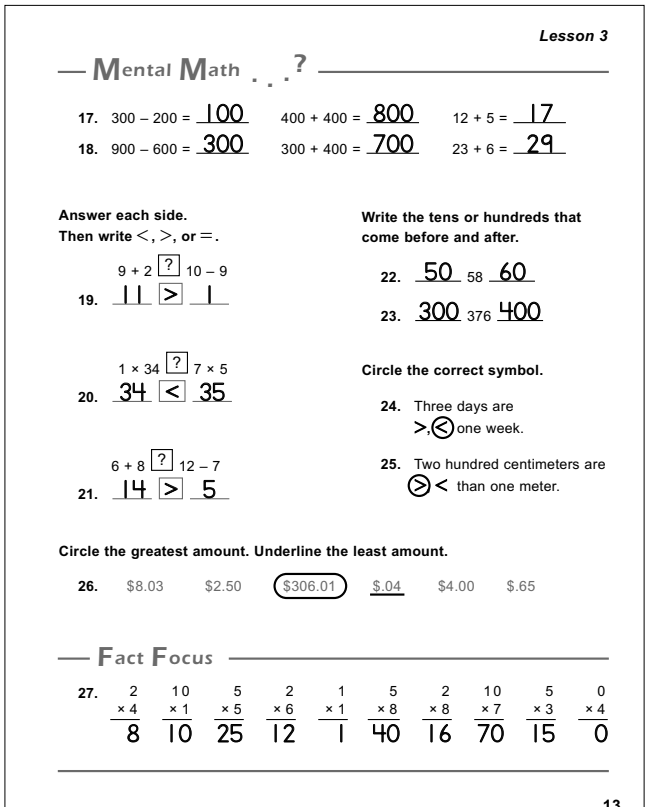
Order of addends may vary.

3 feet, 2 feet

Circle the lines that are parallel.

16.

12



Lesson 3

Mental Math . . .?

17. 300 – 200 = 100 400 + 400 = 800 12 + 5 = 17

18. 900 – 600 = 300 300 + 400 = 700 23 + 6 = 29

Answer each side. Then write <, >, or =.

19. 9 + 2 ? 10 − 9 → 11 > 1

20. 1 × 34 ? 7 × 5 → 34 < 35

21. 6 + 8 ? 12 − 7 → 14 > 5

Write the tens or hundreds that come before and after.

22. 50 58 60

23. 300 376 400

Circle the correct symbol.

24. Three days are (>), (<) one week.

25. Two hundred centimeters are (>), (<) than one meter.

Circle the greatest amount. Underline the least amount.

26. $8.03 $2.50 (**$306.01**) $.04 $4.00 $.65

Fact Focus

27.

2 × 4	10 × 1	5 × 5	2 × 6	1 × 1	5 × 8	2 × 8	10 × 7	5 × 3	0 × 4
8	10	25	12	1	40	16	70	15	0

13

Enjoy THE JOURNEY

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