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Foreword

Math Mammoth Kindergarten Workbook A and Kindergarten Workbook B comprise a complete math curriculum for the kindergarten mathematics studies. The curriculum meets the Common Core standards.

The main areas of study in these two workbooks are:

1. Basic counting skills within 0-100.
2. Addition and subtraction within 0-10, including word problems.
3. Identify, describe, analyze, and compose basic shapes.

Additional topics covered are sorting objects, comparing quantities and numbers, some foundations for measurement, position words, ordinal numbers, and counting coins.

This book, the kindergarten workbook A, covers counting and writing numbers (chapter 1), groups, comparing, and sorting (chapter 2), addition and measurement (chapter 3), and subtraction (chapter 4). The workbook B covers shapes, measurement, two-digit numbers, money, position words, ordinal numbers, and more addition and subtraction.

I heartily recommend that you read the full user guide in the following pages.

I wish you success in teaching math!

Maria Miller, the author

User Guide

Note: You can also find the information that follows online, at <https://www.mathmammoth.com/userguides/>.

The Common Core Standards documentation is available at:
<https://www.mathmammoth.com/preview/standards/MM-CCS-K-2026.pdf>

Basic principles in using the Math Mammoth Kindergarten curriculum

Math Mammoth kindergarten curriculum is overall mastery-based, but it is slightly more spiral than the other grade levels of Math Mammoth, because most chapters deal with two major topics instead of one.

The kindergarten level differs from the other levels of Math Mammoth also in the fact that it is not expected that the child read the instructions or work independently very much. This level is meant to be **teacher-led**.

There are two student books (A and B). The chapters in them are intended to be studied mostly in order. However, you can do the lessons on shapes, measurement, and position words earlier or later, as you wish.

The **two student worktexts** (parts A and B) contain all the lesson material and exercises. Many of the lessons include activities that teach concepts, and those are explained right in the student books. Don't skip the activities, as they are an integral part of learning the concepts and skills for this level.

Some lessons include an explanation of the concept in a blue box. You, as the parent/teacher, need to explain the concept to the child(ren), using the blue teaching box as a guide. And then, almost all of the lessons contain some exercises for the child to do in the book.

Each chapter introduction explains the basic goals for the chapter. Most of them also list **games** (both online and offline games) that you can use to reinforce and practice the main skills in the chapter. Then, each chapter introduction also includes a link to a list of free online games and activities from other websites. All of these games can be used to supplement the math lessons, for learning math facts, or just for some fun.

We also include a versatile **worksheet maker** that allows you to make additional worksheets for the main topics in the curriculum. You will need Internet access to be able to use it. Access it here:

https://www.mathmammoth.com/private/Make_extra_worksheets_K.htm

Manipulatives

Below you will find a list of the recommended and optional manipulatives for the activities and games.

Recommended manipulatives

- a 100-bead abacus
- dice
- dominoes
- number cards, UNO cards, or regular playing cards
- a set of geometric solids (part B, chapter 7)
- a set of pattern blocks (part B, chapter 5)
- toothpicks and modeling clay (part B, chapter 7; for building geometric solids)
- a tangram set (part B, chapter 7)

Optional manipulatives

- counting bears (optional but can be fun because the sets often come with sorting cups and activity cards)
- math linking cubes (Unifix cubes)
- Cuisenaire rods (optional)

Sample worksheet from
<https://www.mathmammoth.com>

Many of the activities use various commonly found items that you probably have on hand in your home. For your convenience, we include a list of the recommended items and links to Amazon below. Note: You only need *one* item from each section. We're providing several options, plus naturally there exist many more choices for these products.

Recommended manipulatives

A 100-bead abacus or school abacus

There are lots of choices; search Amazon's collection here:

<https://www.amazon.com/s?k=school+abacus&tag=mathmammoth-20>

Learning Resources 10-Row Counting Frame or Abacus for Kids

This abacus has every five beads in alternating color (red, white), which is nice.

<https://www.amazon.com/dp/B01LX6K2CV/?tag=mathmammoth-20>

Wooden Abacus for Kids with Counting Sticks and Number Cards

<https://www.amazon.com/dp/B08SBWKJZJ/?tag=mathmammoth-20>

Geometric Pattern Blocks and Tangram-like games

Coogam Wooden Pattern Blocks Set 130PCS

<https://www.amazon.com/dp/B07MYK64R/?tag=mathmammoth-20>

Beestech Wooden Tangram game with a puzzle Book

<https://www.amazon.com/dp/B07Y37NNSR/?tag=mathmammoth-20>

Vanmor Wooden Tangram set with shape cards

<https://www.amazon.com/dp/B07XJ23KPG/?tag=mathmammoth-20>

Wooden pattern blocks shape set with pattern cards

<https://www.amazon.com/dp/B0CMTB3DR2/?tag=mathmammoth-20>

GEMEM wooden pattern blocks set with design cards

<https://www.amazon.com/dp/B07QPS5CFL/?tag=mathmammoth-20>

Geometric solids (3-D shapes)

DEEKIN 36 Pcs Geometric Shapes \$21

<https://www.amazon.com/dp/B0BN8TXVK6/?tag=mathmammoth-20>

DEEKIN 70 Pcs Wood Geometric Solids

<https://www.amazon.com/gp/product/B0BC19RL8V/?tag=mathmammoth-20>

Learning Resources Wood Geometric Solids Set of 19

<https://www.amazon.com/dp/B000T1QQZ8/?tag=mathmammoth-20>

Search Amazon's collection for geometric solids:

<https://www.amazon.com/s?k=geometric+solids&tag=mathmammoth-20>

Optional manipulatives

Cuisenaire Rods

<https://www.amazon.com/dp/B016DU8UR0/?tag=mathmammoth-20>

Sample worksheet from
<https://www.mathmammoth.com>

Counting Bears

Bmag counting bears

<https://www.amazon.com/dp/B07ZNYDLXY/?tag=mathmammoth-20>

Neorod counting bears

<https://www.amazon.com/dp/B085ZSMK8P/?tag=mathmammoth-20>

Linking Cubes

Learning Resources MathLink Cubes (100 pcs)

<https://www.amazon.com/dp/B000URL296/?tag=mathmammoth-20>

200 Pcs Math Linking Cubes

<https://www.amazon.com/dp/B0GGCK8L8D/?tag=mathmammoth-20>

Search Amazon's collection for math linking cubes:

<https://www.amazon.com/s?k=math+linking+cubes&tag=mathmammoth-20>

Pacing the curriculum

Each chapter introduction contains a suggested pacing guide for that chapter. You will see a summary on the right.

Most lessons are one page long, intended for one day. Some lessons are two pages, either intended for one day or two. There are also some optional lessons (e.g. about coins), not included in the charts on the right.

It can also be helpful to calculate a general guideline as to how many pages per week the student should cover in order to go through the curriculum in one school year.

Worktext A	
Chapter 1	19 days
Chapter 2	14 days
Chapter 3	25 days
Chapter 4	21 days
TOTAL	79 days

Worktext B	
Chapter 5	14 days
Chapter 6	17 days
Chapter 7	20 days
Chapter 8	13 days
TOTAL	64 days

The chart below lists how many pages there are for the student to finish in this particular grade level, and gives you a guideline for how many pages per day to finish, assuming a 170-day (34-week) school year. The page count in the table below *includes* the optional lessons (in particular, the lessons about coins).

Example:

Grade level	Lesson pages	School days	Pages to study per day	Pages to study per week
K-A	89	91	1	5
K-B	79	79	1	5
Kindergarten total	168	170		

The table below is for you to fill in. To get the count of “pages to study per day”, **divide the lesson pages by the school days**. Lastly, multiply this number by 5 to get the approximate page count to cover in a week.

Grade level	Lesson pages	School days	Pages to study per day	Pages to study per week
K-A	89			
K-B	79			
Kindergarten total	168			

Sample worksheet from
<https://www.mathmammoth.com>

In general, kindergartners might spend 15-30 minutes a day on math, 1st-2nd graders might spend 25-40 minutes, third-fourth graders 30-60 minutes a day, and fifth-sixth graders 45-75 minutes a day. If your student finds math enjoyable, they can of course spend more time with it! However, it is not good to drag out the lessons on a regular basis, because that can then affect the student's attitude towards math.

Working space and the usage of additional paper

The curriculum generally includes working space directly on the page for students to work out the problems. However, feel free to let your students use extra paper when necessary. They can use it to draw diagrams and pictures to help organize their thoughts. Some students won't need the additional space (and may resist the thought of extra paper), while some will benefit from it. Use your discretion.

Concerning tests

While the rest of the grade levels in Math Mammoth include chapter tests, I feel that such testing is not necessary in kindergarten, as it can so easily lead to math anxiety and to viewing mathematics as a subject where correct answers are what matters most. Using tests has two sides. Even in other grade levels, the tests are optional. On the positive side, they can help the teacher know how their students are doing, and even help the student to know where they are at and to perhaps get some useful feedback. But all too often, testing leads to math anxiety. Also, students tend to study for the test only, just to forget the information right afterwards.

You can learn to assess your student(s) over the course of the year by observing them. This is even easier when you will be doing many activities with them that teach math concepts. You will be able to see where your child struggles and where they excel. You can even base a grade solely on your observations (if you need to give a grade). Or, you can use the chapter reviews as part of the grade.

The curriculum does include an optional end-of-year test, which is best used as a diagnostic or assessment test. If you do use it, it can tell you how well the child has mastered essential kindergarten math content.

Concerning the mixed reviews and the worksheet maker

The books contain mixed review lessons which practice concepts and skills from earlier chapters. They allow you to spot areas that the student has not grasped well or has forgotten. When you find such a topic or concept, you have several options:

1. Check if the worksheet maker lets you make worksheets for that topic.
https://www.mathmammoth.com/private/Make_extra_worksheets_K.htm
2. Check for any games and resources in the Introduction part of the particular chapter in which this topic or concept was taught.
3. If you have the digital version, you can reprint a corresponding lesson from the worktext for the student.
4. Check if our online practice area at <https://www.mathmammoth.com/practice/> has something for that topic.
5. Khan Academy has free online exercises, articles, and videos for most any math topic imaginable.

Frequently asked questions and contacting us

If you have more questions, please first check the FAQ at <https://www.mathmammoth.com/faq-lightblue>

If the FAQ does not cover your question, you can contact us <https://www.mathmammoth.com/contact>

Sample worksheet from
<https://www.mathmammoth.com>

Chapter 1: Counting & Writing Numbers

Introduction

Chapter 1 of *Math Mammoth Kindergarten Worktext A* focuses on counting and learning to write numbers.

Being able to count accurately is not as simple as it seems to us adults. Mastering the act of counting means that the child be able to do *all* these:

- Recite the counting sequence (one, two, three, four, ...) in the correct order and without skipping any words
- Match one counting word with exactly one item (one-to-one correspondence). The child needs to learn to pair each object with one and only one number name, and each number name with one and only one object.
- Understand cardinality: that the last word spoken tells us the total number of items in the group. In other words, children need to connect the verbal count ("1, 2, 3, 4") to the thought of "how many".

You can test for this by having a child count some objects, and after they have the count, rearrange the *same* objects and ask again how many there are. If the child has to count again, they don't have the concept of cardinality yet.

Some other goals for this chapter are:

- Connect number words to written numerals.
- Understand that the number of objects is the same regardless of their arrangement or the order in which they were counted. Again, this is the thought of cardinality. To help a child learn it, ask them to count a number of objects twice, but starting from a different object, and help them realize the count is the same.
- Learn that each successive number name refers to a quantity that is *one* larger.
- Learn to count forward beginning from a given number, instead of having to begin at 1.

Counting is foundational to learning addition and subtraction. Many children already learn to count before kindergarten, so feel free to go through this chapter quickly if that is the case.

The worksheet maker at https://www.mathmammoth.com/private/Make_extra_worksheets_K.htm provides worksheets for writing numbers and for counting, should your student(s) need extra practice with those.

Students do more counting in chapter 6, where they will learn to count to 100 by ones and by tens. They will learn that it is quicker to count a large number of items if they are grouped into tens first. This prepares them to learn place value with two-digit numbers in first grade.

Good Mathematical Practices

- Here, and in all further studies of mathematics, children need to learn to be accurate and precise in their communication about math. Counting is a topic where it is easy for children to see the need to be accurate. We want an accurate count! True, there is a place for estimation also, but in kindergarten, the emphasis is on counting small quantities, and to learn to count accurately. Understanding one-to-one correspondence is naturally the key to that.

Pacing Suggestion for Chapter 1

Each lesson is intended to take one day. Feel free to take a day at times to just do activities and play games, without any written work. We want children to enjoy doing math, and not feel pressured.

Sample worksheet from
<https://www.mathmammoth.com>

The Lessons in Chapter 1	page	span	suggested pacing	your pacing
Counting and Sorting Objects	18	1 page	1 day	
Learning to Write 1	19	1 page	1 day	
Learning to Write 2	20	2 pages	1 day	
Learning to Write 3	22	2 pages	1 day	
Learning to Write 4	24	2 pages	1 day	
Practice 1	26	1 page	1 day	
Learning to Write 5	27	2 pages	1 day	
Learning to Write 6	29	2 pages	1 day	
How Many?	31	1 page	1 day	
Learning to Write 7	32	1 page	1 day	
Practice 2	34	1 page	1 day	
Learning to Write 8	35	2 pages	1 day	
Learning to Write 9	37	2 pages	1 day	
Cuisenaire Rods (optional)	39	1 page	1 day	
Learning to Write 10	40	1 page	1 day	
Counting Practice	41	1 page	1 day	
Practice 3	42	1 page	1 day	
Practice with Patterns	43	1 page	1 day	
More Counting	44	1 page	1 day	
Chapter 1 Review	45	1 page	1 day	
TOTALS		26 pages	19 days	
with optional content		(27 pages)	(20 days)	

Games and Activities

Board games (*Counting*)

You need: Any board game you might have where you move pieces by rolling one or two dice works to practice counting and the counting sequence.

Secret Bag (*The counting sequence, counting, estimating*)

You need: A small non-transparent bag. Small items, such as rocks, ping pong balls, spoons, buttons, etc.

Activity: Place some (up to 10) of the items in the bag. Ask the child or students to guess how many items are in the bag. You may let them even feel the bag. Once the guesses are in, pull the items out one by one (or have a child do that), with everyone counting aloud. Then repeat, taking turns.

Bean Bag Toss (*Number recognition; the counting sequence*)

You need: Bean bags, 8-10 sheets of paper, and a marker pen. Write the numbers from 1 to 10 on the papers (one number per sheet), to be the targets. If the child knows how to write numbers, they could write them.

Activity: Place the sheets of paper in order on the floor or on stairs, etc. The child will toss a bean bag on number 1, saying aloud, “One!”, then on number 2, saying aloud “Two!”, and so on.

Sample worksheet from
<https://www.mathmammoth.com>

Further Resources on the Internet

These resources match the topics in this chapter, and offer online practice, online games (occasionally, printable games), and interactive illustrations of math concepts. We heartily recommend you take a look. Many people love using these resources to supplement the bookwork, to illustrate a concept better, and for some fun. Enjoy!

<https://links.mathmammoth.com/Kch1>

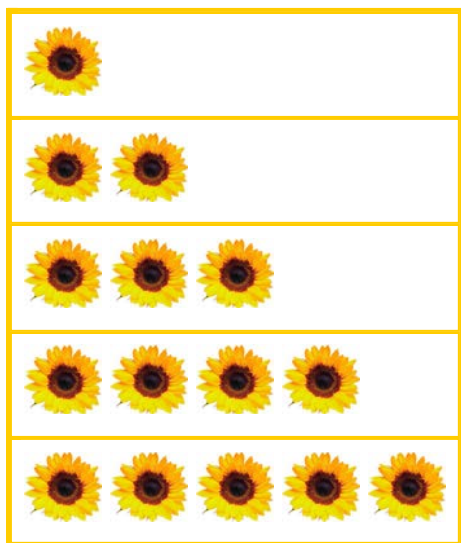


Counting and Sorting Objects

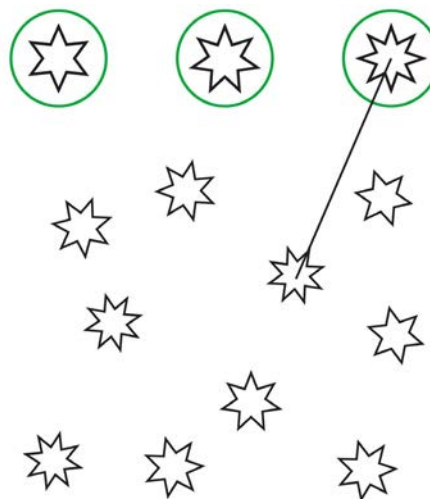


Choose a counting game to play from the chapter introduction. You can use it first, last, or in between the other exercises, depending on what works best for your student(s).

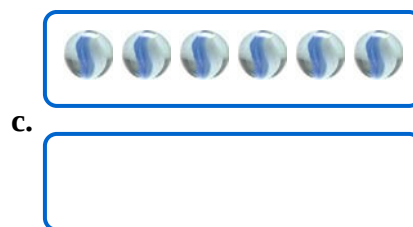
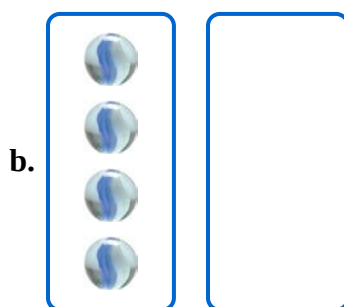
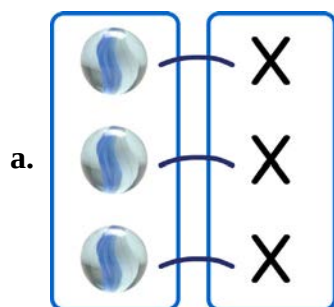
1. Point and count.



2. Color the stars, using a different color for each kind of star. Draw a line from each small star to the matching big star.



3. Write an X for each thing in the other box.



4. Draw a line to match the same amounts.

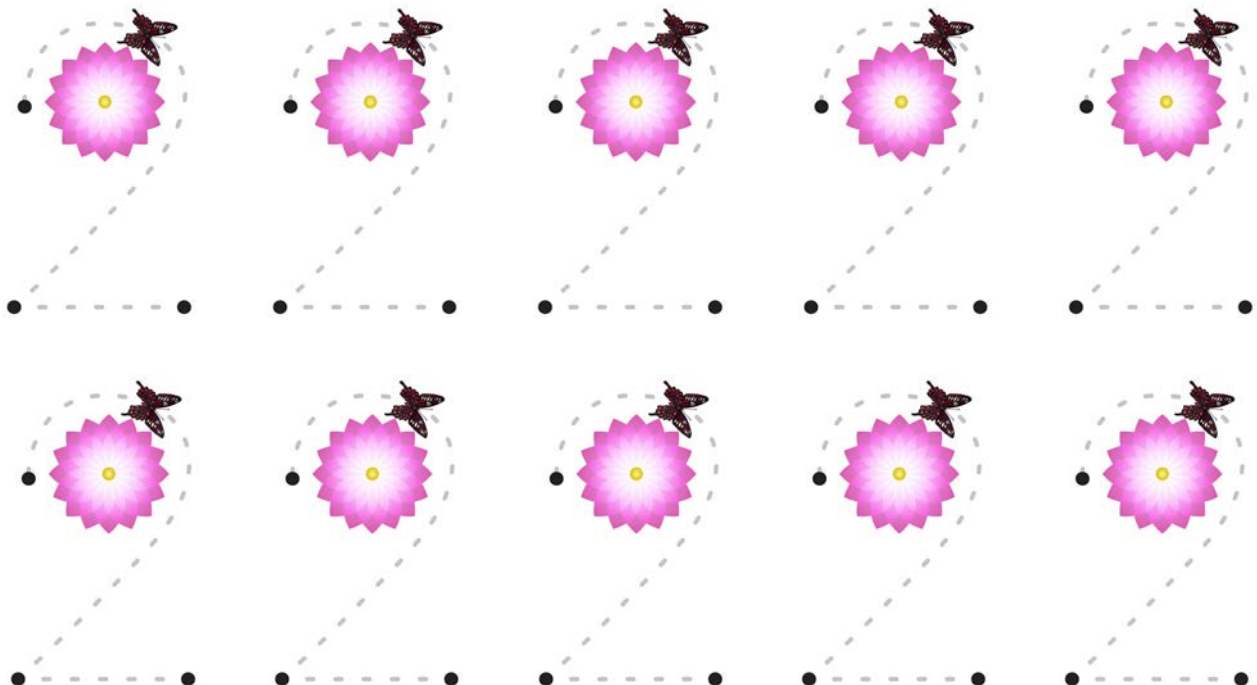


Learning to Write 2

1. Practice tracing two, using colored pencils. The number can be traced multiple times.



2. More tracing practice!

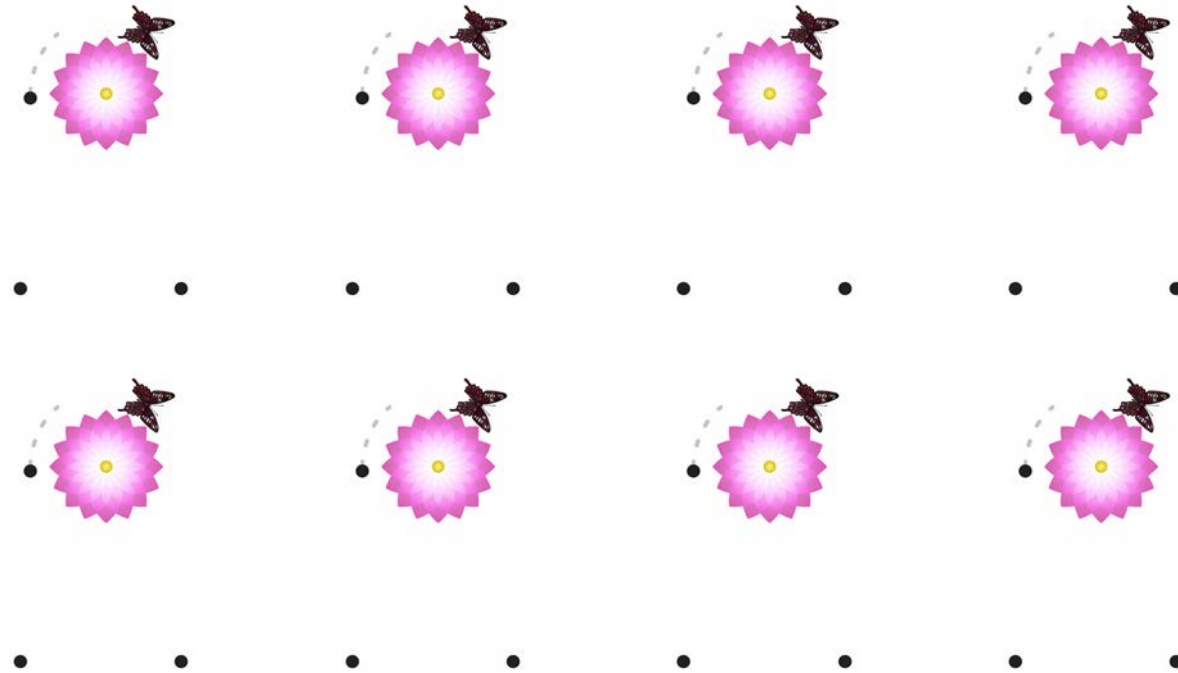


Sample worksheet from
<https://www.mathmammoth.com>

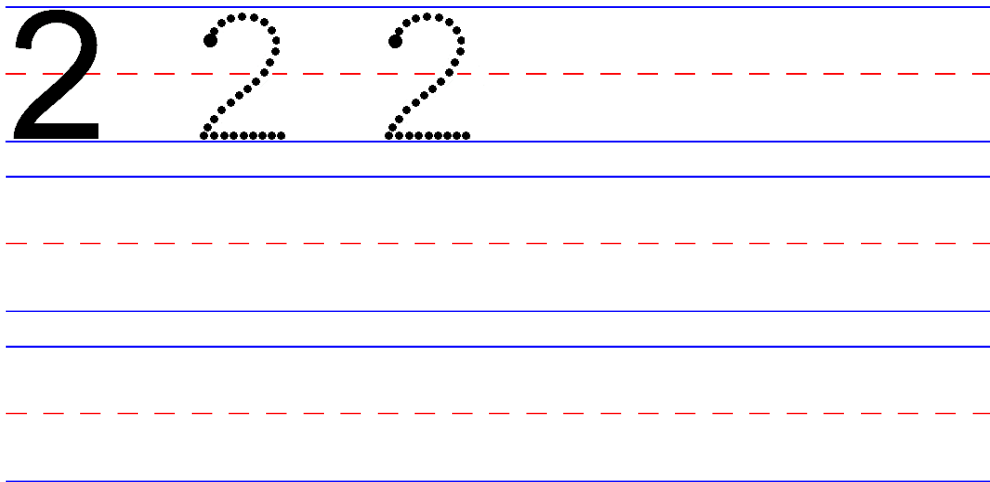


Choose a counting game to play from the chapter introduction. You can use it first, last, or in between the other exercises, depending on what works best for your student(s).

3. Practice tracing the number 2 again. Be careful! This time there are less dots!



4. Practice writing the number 2 on the lines.



5. Color circles as indicated.

a. Color three circles.



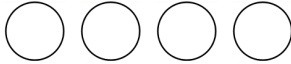
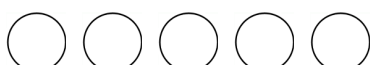
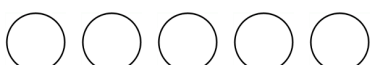
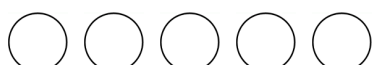
b. Color five circles.



Making Two Groups

- Activity.** Show the child 4 small items, and later 5. Show the child how the items can be separated into two groups (e.g. 1 and 3). Then ask the child to find *different* ways (as many as they can) to separate the items into two groups. Work together as necessary. You can also use Cuisenaire rods.
- Game.** Play “I Get, You Get” and/or “Some Went Hiding” with 4 objects, and then later with 5 objects. (See chapter introduction.)
- Draw a line to separate the circles in two groups as indicated. Color each group with a different color.



a. 4  1 and 3	b. 4  2 and 2	c. 4  3 and 1
d. 5  3 and 2	e. 5  2 and 3	f. 5  1 and 4

- Separate the shapes into two groups with a line. Write how many are in the second group.

a. 4  1 and ____	b. 5  2 and ____	c. 4  3 and ____
---	--	---

- Using a different color, draw more circles so that the total number of circles is the number indicated.

4 

3 

5 

3 

5 

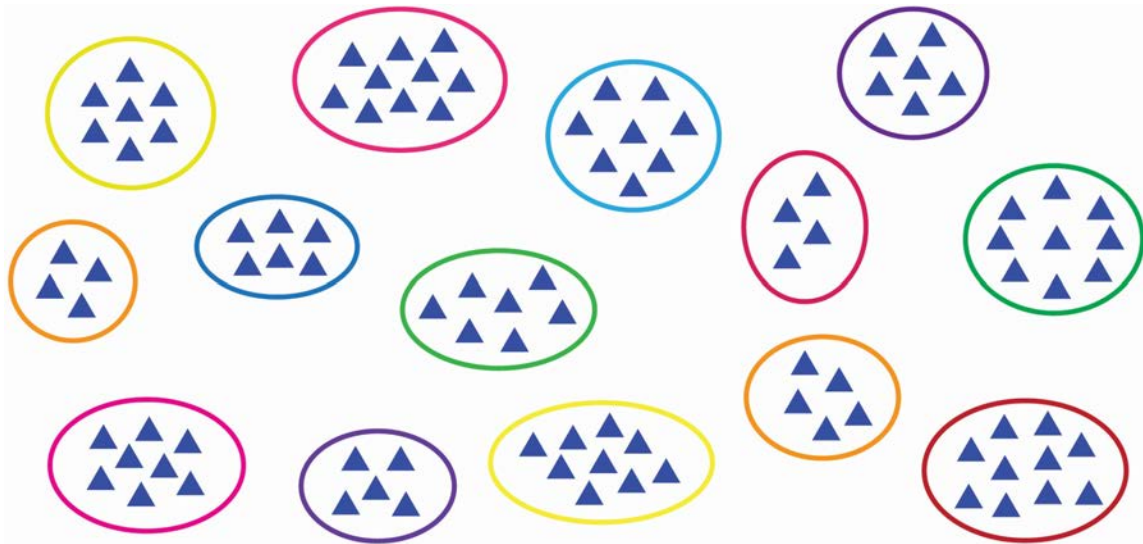
4 

Chapter 2 Review



Play “Put More in the Cup.” (See the chapter introduction).

1. Match **equal** amounts of triangles.



2. Circle the number that is greater (more).

a. 9 8	b. 1 3	c. 7 10	d. 5 2
--------	--------	---------	--------

3. Draw a line to separate the dots in two groups, in different ways. Write how many are in each group.

a. 7 ○ ○ ○ ○ ○ ○ ○ _____ and _____	b. 7 ○ ○ ○ ○ ○ ○ ○ _____ and _____
c. 7 ○ ○ ○ ○ ○ ○ ○ _____ and _____	d. 7 ○ ○ ○ ○ ○ ○ ○ _____ and _____

Adding as “Putting Together”

Emily has four cookies and Megan has three.

They put the cookies together.

How many cookies are there in total?

Count them! There should be 7 cookies in total.

Together: 



- Activity: “Put together”.** Work in pairs (parent/child, teacher/child, or two children). One person shows the other two distinct groups of objects (marbles, buttons, etc. — the sum should be 10 or less). The other counts the objects in each group. Then they put the objects *together* and find how many there are in total. Repeat, taking turns. Optionally, record at least one such addition on paper or whiteboard, using pictures.
- Solve. You can use objects or draw pictures to illustrate the problems.

- a.** Katrina picked two flowers and Anita picked five.



The girls put their flowers together. How many flowers do they have in total? _____

- b.** Justin collected six seashells at the beach and Kim collected three.



How many seashells do they have in total? _____

- c.** Alex has four marbles and Josh has six marbles.
They put their marbles in the same bag.
How many marbles are in the bag now?

- d.** Kyle has three pencils and Emma also has three pencils.
How many pencils do they have together?

- Make up a story from this picture that uses math and numbers.



Addition Word Problems

1. Nicky had three stuffed animals. Her mom gave her some more.
How many stuffed animals does she have now?
(Count on from three to find the total.)



3



2. Draw pictures to illustrate the problems. Tell the answers to your teacher.

- a. David has four strawberries and Candice has: 

They put their strawberries together. How many strawberries do they have in total?

- b. Mia has seven crayons and Carol has three.
They put their crayons together. How many crayons do they have in total?

- c. Susan ate five crackers. Then she ate one more.
How many crackers did she eat in total?

3. Continue the number patterns.

a. 5 6 7 5 6 7 _____

b.  _____
Sample worksheet from <https://www.mathmammoth.com>

Subtraction as “Taking Away”

From six cookies we take away two.  $6 - 2$ Six minus two	There are four left.  $=$ equals 4 four
---	--

- Activity.** Show the student(s) a certain number of small items. Then take away some of them, while explaining that you are taking away or *subtracting* so many. Have the student(s) find how many are left. Then state the subtraction sentence using the words “minus” and “equals”. Take turns.
- Subtract. “Take away” the crossed-out objects by covering them with your finger. Write how many are left. (Note: Practice reading each sentence with the student using the words “minus” and “equals”.)

 a. $4 - 1 = \underline{\quad}$	 b. $5 - 3 = \underline{\quad}$	 c. $3 - 2 = \underline{\quad}$
 d. $6 - 4 = \underline{\quad}$	 e. $2 - 2 = \underline{\quad}$	 f. $7 - 5 = \underline{\quad}$

- Cross out marbles to indicate subtraction. How many are left?

 a. $3 - 1 = \underline{2}$	 b. $9 - 5 = \underline{\quad}$	 c. $8 - 2 = \underline{\quad}$
 d. $4 - 2 = \underline{\quad}$	 e. $10 - 3 = \underline{\quad}$	 f. $5 - 5 = \underline{\quad}$

- Solve the problems. You can draw pictures to help you.

a. Kay had five grapes. Then a bird stole two.
How many grapes does Kay have now?

b. Ian saw three bugs. Then he saw three more.
How many bugs did Ian see in total?