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Foreword

Math Mammoth Grade 1 comprises a complete math curriculum for the first grade mathematics studies. The curriculum meets and exceeds the Common Core standards.

The main areas of study for first grade are:

1. The concepts of addition and subtraction, and strategies for addition and subtraction facts;
2. Developing understanding of place value up to 100;
3. Developing understanding and some basic strategies for two-digit addition and subtraction.

Additional topics we study in the first grade are telling time (whole and half hours), geometric shapes, measurement, and counting coins.

This book, 1-A, covers the concepts of addition and subtraction (chapters 1 and 2) and place value with two-digit numbers (chapter 3). The book 1-B covers strategies for addition and subtraction facts, clock, shapes and measuring, adding and subtracting two-digit numbers, and counting coins.

Some important points to keep in mind when using the curriculum:

- These two books (parts A and B) are like a “framework”, but you still have a lot of liberty in planning your child’s studies. While addition and subtraction topics are best studied in the order they are presented, feel free to go through the sections on shapes, measurement, clock, and money in any order you like.

This is especially advisable if your child is either “stuck” or is perhaps getting bored with some particular topic. Sometimes the concept the child was stuck on can become clear after a break from the topic.

- Math Mammoth is mastery-based, which means it concentrates on a few major topics at a time, in order to study them in depth. However, you can still use it in a *spiral* manner, if you prefer. Simply have your child study in 2-3 chapters simultaneously. This type of flexible use of the curriculum enables you to truly individualize the instruction for your child.
- Don’t automatically assign all the exercises. Use your judgment, trying to assign just enough for your child’s needs. You can use the skipped exercises later for review. For most children, I recommend to start out by assigning about half of the available exercises. Adjust as necessary.
- For review, the curriculum includes a worksheet maker (Internet access required), mixed review lessons, additional cumulative review lessons, and the word problems continually require usage of past concepts. Please see more information about review (and other topics) in the FAQ at <https://www.mathmammoth.com/faq-lightblue.php>

I heartily recommend that you view the full user guide for your grade level, available at <https://www.mathmammoth.com/userguides/>

And lastly, you can find free videos matched to the curriculum at <https://www.mathmammoth.com/videos/>

I wish you success in teaching math!

Maria Miller, the author

Chapter 0: Kindergarten Math Review

Introduction

This chapter is optional, and can be used to review the most important concepts of kindergarten math:

- writing the numerals 0 to 9
- counting up to 20
- position words, color words, and some shapes (circle, triangle, square)
- simple patterns

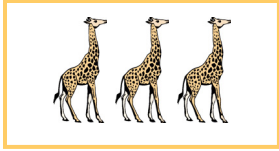
Pacing Suggestion for Chapter 0

The Lessons in Chapter 0	page	span	suggested pacing	your pacing
Equal Amounts; Same and Different	7	<i>1 page</i>	0.5 day	
Writing Numbers	8	<i>2 pages</i>	0.5 day	
Counting	10	<i>2 pages</i>	1 day	
Position Words, Colors, and Shapes	12	<i>2 pages</i>	1 day	
Patterns	14	<i>1 page</i>	1 day	
TOTALS		<i>8 pages</i>	4 days	

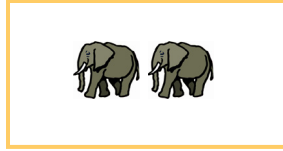
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Counting

1. Count. Write the number in the box.



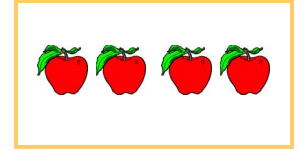
a.



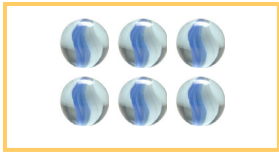
b.



c.



d.



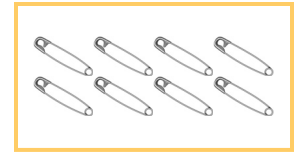
e.



f.



g.

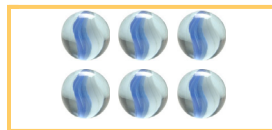


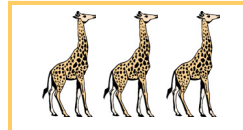
h.

2. Count. Write the number. Then circle the number that is MORE.

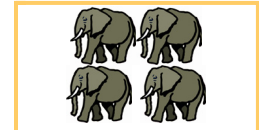


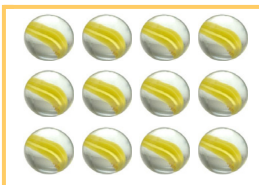
a.



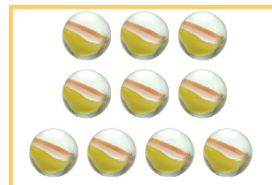


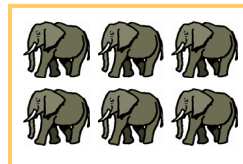
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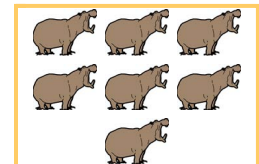


c.

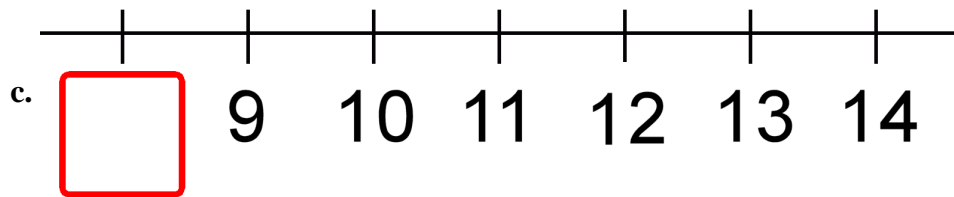
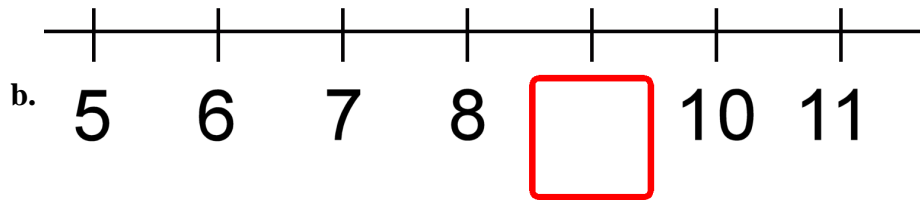
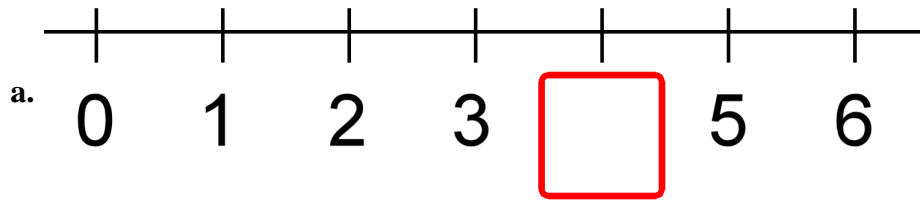




d.



3. Write the missing number below the number line.

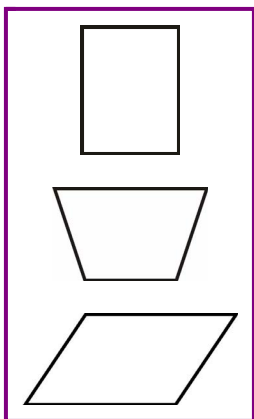


4. Circle the group that has more things. Then count ALL (both groups).
Write the number in the box below.

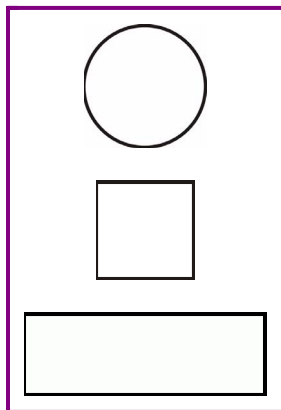
<p>a. <input type="text"/></p>	<p>b. <input type="text"/></p>	<p>c. <input type="text"/></p>
<p>d. <input type="text"/></p>	<p>e. <input type="text"/></p>	<p>f. <input type="text"/></p>

Position Words, Colors, and Shapes

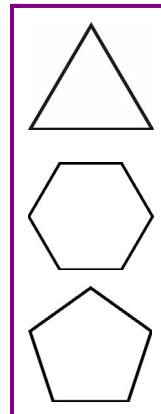
1. a. Color the top shape RED.



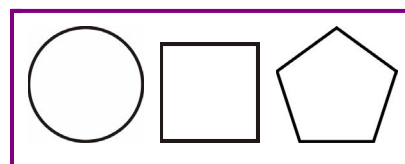
b. Color the bottom shape BLUE.



c. Color the middle shape YELLOW.



2. a. Color the shape on the right GREEN.



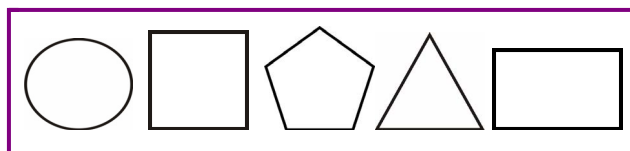
b. Color the shape in the middle BLUE.



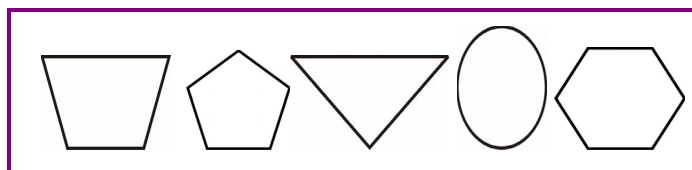
c. Color the shape on the left YELLOW.



d. Color the two shapes on the right ORANGE.



e. Color the two shapes on the left PURPLE.



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Chapter 1: Addition Within 0-10

Introduction

The first chapter of *Math Mammoth Grade 1-A* concentrates on the concept of addition and addition facts within 0-10.

The chapter starts out with very easy and visual addition problems within 0-5, where children can simply count the objects to add. You can easily adapt these early lessons to be done with concrete objects or manipulatives.

If the child does not know the symbols “+” and “=” yet, you can introduce them *orally* at first. Use blocks or other objects to illustrate, and say: “Three blocks and four blocks makes seven blocks. Three blocks *plus* four blocks *equals* seven blocks.” Then ask the child to make an addition problem with the objects, using those words. Play like that until the child can use the words “plus” and “equals” in his or her own speech. This will make it easier to learn to use the written symbols.

In the lesson *Which Is More?*, the symbols “<” and “>” are introduced as being like a “hungry alligator’s mouth.” In this lesson, children only compare numbers, such as $5 < 7$. In later lessons, children will also learn to compare expressions, such as $2 + 3 < 4 + 4$.

Next, we introduce “missing addend” problems, or problems such as $1 + \underline{\quad} = 5$. First, the lesson uses pictures, and then gradually only symbols. These problems are very important, as they lead the child to learn the connection between addition and subtraction.

A child might confuse the missing number problem $1 + \underline{\quad} = 5$ with $1 + 5 = \underline{\quad}$. To help the child see the difference, word these problems like this: “One and *how many more* make five?”

You can also model missing addend problems by drawing. In our example of $1 + \underline{\quad} = 5$, the teacher would first draw one stick, and then tell the student, “We need a total of five sticks. Draw more until there are five of them.” The number of sticks that the child needs to draw in order to make five is the number that goes on the empty line. So, you can say, “First there was one stick, then you needed to add (draw) some more to make 5. How many more did you draw?”

Then we come to the lesson *Sums with 5*. It practices the number bonds (number combinations) that add up to 5, which are 0 and 5, 1 and 4, and 2 and 3. After that, we study sums with 6, sums with 7, and so on. The goal of these lessons is to help the child to memorize addition facts within 10. However, the child does not need to fully memorize them yet. All of these lessons are building toward that goal, but the final mastery of addition facts does not have to happen this early in first grade.

My approach to memorizing the basic addition facts within 0-10 is many-fold:

1. Structured drills, such as used in the lessons *Sums with 5*, *Sums with 6*, and so on, are not random drills, because they use the pattern or the structure in the facts. This will connect the facts to a context, and help the child to better understand the facts on a conceptual level, instead of merely memorizing them at random. In each of these lessons, the child learns the number combinations that add up to the specific number (aka number bonds). This understanding is the basis for the drills.
2. Using addition facts in games and in everyday life is very helpful — and especially in games, because most children like to play games.
3. Random drilling may also be used, sparingly, as one tool among others.
4. Memory helpers can be silly mnemonics or writing math facts on a poster and hanging it on the wall. Not all children need these, but feel free to use them if you like.

These same addition facts are studied again in the following chapter about subtraction. They are also used constantly in all later math work. I recommend that children become fluent with addition facts within 0-10 by the end of first grade.

Another important thread running through the chapter is to develop a child’s understanding of the symbols +, <, and >. The lessons in the chapter help children get used to equations such as $9 = 5 + 4$ and inequalities such as $2 < 5 + 4$, to build the correct understanding of these symbols.

Many children develop a misconception of the equals sign being an “operator,” as if it means that you need to add/subtract/multiply/divide, or “operate” on the numbers in the equation. A child with this misconception will treat the equation $9 = \underline{\quad} + 4$ as an addition problem $9 + 4$. Instead, the equals sign is just that, signifying that what is on the right and left side of the sign are equal in value.

A number line is an important way to model addition, as it helps to build number sense and ties in with measurement. Children also encounter addition tables, number patterns, word problems, and get used to a symbol for the unknown number (such as in $\square + 5 = 10$). So, while it may look on the surface that all we do is add small numbers, actually, a lot happens in this chapter!

Please also see the following pages for games that I recommend while studying this chapter. Games are important at this level, as they help children to practice the addition facts and also make math fun.

Lastly, don’t forget to check out the free videos matched to the curriculum at <https://www.mathmammoth.com/videos/>.

Pacing Suggestion for Chapter 1

Please add one day to the pacing for the test if you will use it. Note that the specific lessons in the chapter can take several days to finish. They are not “daily lessons.” As a general guideline, first graders should finish 1-2 pages daily or 7-9 pages a week. Please also see the user guide at <https://www.mathmammoth.com/userguides/>.

The Lessons in Chapter 1	page	span	suggested pacing	your pacing
Two Groups and a Total	19	3 pages	2 days	
Learn the Symbols “+” and “=”	22	3 pages	2 days	
Addition Practice 1	25	2 pages	1 day	
Which Is More?	27	2 pages	2 days	
Missing Items	29	5 pages	2 days	
Sums with 5	34	2 pages	2 days	
Sums with 6	36	2 pages	2 days	
Adding on a Number Line	38	4 pages	2 days	
Sums with 7	42	3 pages	2 days	
Sums with 8	45	3 pages	2 days	
Adding Many Numbers	48	3 pages	2 days	
Addition Practice 2 (optional)	51	2 pages	1 day	
Sums with 9	53	4 pages	2 days	
Sums with 10	57	4 pages	2 days	
Comparisons	61	3 pages	2 days	
Review of Addition Facts	64	4 pages	2 days	
Chapter 1 Test (optional)				
TOTALS		47 pages	29 days	
with optional content		(49 pages)	(30 days)	

Games and Activities

Some Went Hiding

You need: The same number of small objects as the sum you are studying. For example, to study the sums with 5, you need 5 objects (marbles, blocks, etc).

Game play: The first player shows the objects but quickly hides some of them behind his back without showing how many. Then he shows the remaining objects to the next player, who has to say how many “went hiding.” If the player gives the right answer, it is then his turn to hide some and ask the next player to answer. If he gives a wrong answer, he forfeits his turn. This game appeals best to young children.

Variation: Instead of getting a turn to hide objects, the player who answers correctly may gain points or other rewards for the right answer.

10 Out (or 6 Out, 7 Out, 8 Out, etc.)

You need: A deck of number cards with numbers 1-10, or regular playing cards without the face cards.

Preparation: Choose a target sum, such as 10. Deal seven cards to each player. Place the rest face down in a pile in the middle of the table.

Game play: At your turn, first take one card from the pile. Then try to find pairs of cards in your hand that add up to 10, and discard any such pairs. Discard the card 10 also if you have it. If you cannot find any such pairs, ask for any one card you want (such as 6) from the player to your right (as in “Go Fish”). That player, if he has it, must give it, and you will then discard the pair that makes 10. Then it is the next player’s turn. The player who first discards all the cards from his hand is the winner.

Variations:

- * Deal more than seven cards.
- * Deal fewer cards if there are a lot of players or the players are very young.
- * Allow players to discard *three* cards that add up to 10.
- * Instead of ten, players discard cards that add up to 5, 6, 7, 8, or 9.

Number Bonds in the Pond

You need: A standard deck (or several) of playing cards or number cards

Preparation: Choose a target sum for the game. If the target sum is 5, make a deck of cards consisting of numbers 1 through 4. If the target sum is 6, make a deck of numbers 1-5. And so on. (The deck always consists of numbers that are from 1 through $X - 1$ where X is the target sum.) Place a target number card face up between the players, and spread out the rest of the cards face down, like a pond, between the players.

Game play: At your turn, if you don’t have any cards in your hand, take two cards from the pond. If you do, take one card from the pond. Now check if any two cards in your hand add up to the target number. If so, put those cards away to your personal pile. If not, it is the next player’s turn. The game ends when there are no more cards in the pond. The winner is the person with most cards in their personal pile.

Variation: Allow three cards/numbers to be added to reach the target number.

Notes: Depending on the number of players, you may need several decks of cards to make the pond. When first playing this game with your child/students, start with 5 as the target number, and advance to target numbers of 6, 7, and onward. Playing this game several times will help the child to memorize the number bonds (the sums) associated with a particular target number.

Addition Challenge

You need: A standard deck of playing cards from which you remove the face cards and perhaps also some of the other higher-numbered cards, such as tens, nines, and eights. Alternatively, a set of dominoes works well for children who do not yet know the sums beyond 12.

Game Play: In each round, each player is dealt two cards face up, and calculates the sum. The player with the highest sum gets all the cards from the other players. After enough rounds have been played to use all of the cards, the player with the most cards wins. If two or more players have the same sum, those players get an additional two cards and use those to resolve the tie.

Any *board game* where you move the piece by rolling two dice also works well to practice addition.

Games and Activities at Math Mammoth Practice Zone

Single-Digit Addition Practice

<https://www.mathmammoth.com/practice/addition-single-digit>

Addition Hidden Picture Game

<https://www.mathmammoth.com/practice/mystery-picture>

Number Bonds

<https://www.mathmammoth.com/practice/number-bonds>

“7 Up” Addition Facts

<https://www.mathmammoth.com/practice/seven-up>

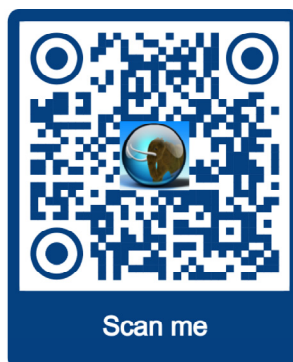
Fruity Math

<https://www.mathmammoth.com/practice/fruity-math>

Further Resources on the Internet

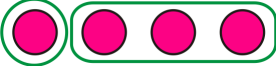





These resources match the topics in this chapter, and offer online practice, online games (occasionally, printable games), and interactive illustrations of math concepts. We heartily recommend you take a look. Many people love using these resources to supplement the bookwork, to illustrate a concept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

<https://links.mathmammoth.com/gr1ch1>

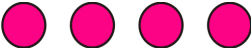
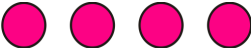









Two Groups and a Total

1. Make two groups.

<p>a. 4</p>  <p>1 and 3</p>	<p>b. 4</p>  <p>2 and 2</p>	<p>c. 4</p>  <p>3 and 1</p>
<p>d. 5</p>  <p>3 and 2</p>	<p>e. 5</p>  <p>2 and 3</p>	<p>f. 5</p>  <p>1 and 4</p>

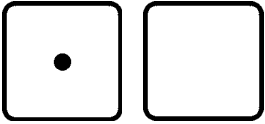
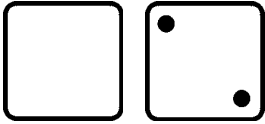
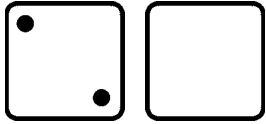
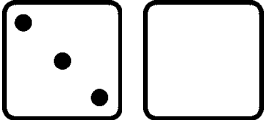
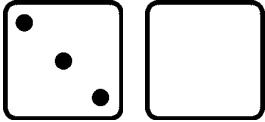

2. Make two groups. Write how many are in the second group.


<p>a. 4</p>  <p>1 and _____</p>	<p>b. 4</p>  <p>2 and _____</p>	<p>c. 4</p>  <p>3 and _____</p>
<p>d. 5</p>  <p>4 and _____</p>	<p>e. 5</p>  <p>3 and _____</p>	<p>f. 5</p>  <p>2 and _____</p>
<p>g. 5</p>  <p>1 and _____</p>	<p>h. 5</p>  <p>5 and _____</p>	<p>i. 5</p>  <p>0 and _____</p>

3. Draw as many dots as the number shows. Then divide them into two groups.
(There are many ways to do this.) Write how many are in each group.

a. 3 _____ and _____	b. 5 _____ and _____	c. 4 _____ and _____
d. 2 _____ and _____	e. 6 _____ and _____	f. 8 _____ and _____


4. The number at the top is the total. Draw the missing dots on the face of the blank dice.
Write on the lines how many dots are on the face of each dice.

a. 3  _____ and _____	b. 6  _____ and _____	c. 5  _____ and _____
d. 4  _____ and _____	e. 6  _____ and _____	f. 5  _____ and _____



2 and 2





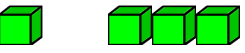




“Two and two makes four.”



1 and 4

“One and four makes five.”

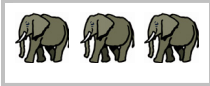
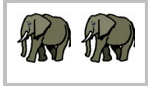
5. Write how many are in each group. Write the total in the box.


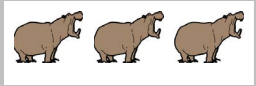
<p>a. </p> <p>___ and ___ <input type="text"/></p>	<p>b. </p> <p>___ and ___ <input type="text"/></p>	<p>c. </p> <p>___ and ___ <input type="text"/></p>
<p>d. </p> <p>___ and ___ <input type="text"/></p>	<p>e. </p> <p>___ and ___ <input type="text"/></p>	<p>f. </p> <p>___ and ___ <input type="text"/></p>
<p>g. </p> <p>___ and ___ <input type="text"/></p>	<p>h. </p> <p>___ and ___ <input type="text"/></p>	<p>i. </p> <p>___ and ___ <input type="text"/></p>

6. Draw circles for each number. Write the total in the box.




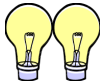

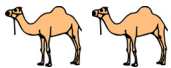












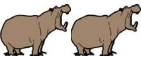

<p>a. 2 and 2 <input type="text"/></p>	<p>b. 3 and 1 <input type="text"/></p>
<p>c. 3 and 3 <input type="text"/></p>	<p>d. 1 and 4 <input type="text"/></p>

Learn the Symbols + and =

				
3	+	2	=	5
THREE plus TWO equals FIVE				

				
1	+	3	=	4
ONE plus THREE equals FOUR				



1. Fill in the numbers. Add. Read the additions aloud using “plus” and “equals”.

<p>a.  </p> <p><u> 1 </u> + <u> 3 </u> = <input type="text"/></p>	<p>b.  </p> <p>_____ + _____ = <input type="text"/></p>
<p>c.  </p> <p>_____ + _____ = <input type="text"/></p>	<p>d.  </p> <p>_____ + _____ = <input type="text"/></p>
<p>e.  </p> <p>_____ + _____ = <input type="text"/></p>	<p>f.  </p> <p>_____ + _____ = <input type="text"/></p>
<p>g.  </p> <p>_____ + _____ = <input type="text"/></p>	<p>h.  </p> <p>_____ + _____ = <input type="text"/></p>
<p>i.  </p> <p>_____ + _____ = <input type="text"/></p>	<p>j.  </p> <p>_____ + _____ = <input type="text"/></p>

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Subtraction Is "Taking Away"

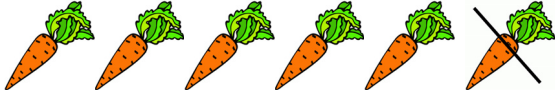

From five bananas we take away three. There are two left.

$$5 - 3 = 2$$

Five minus three equals two

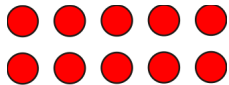
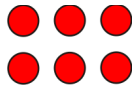
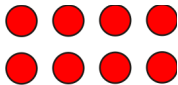
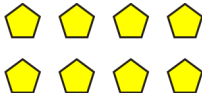
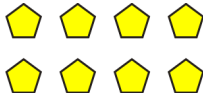
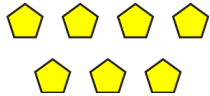
From six carrots we take away one. There are five left.




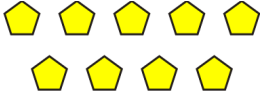
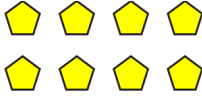
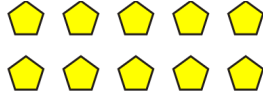
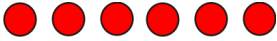
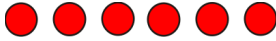




$$6 - 1 = 5$$







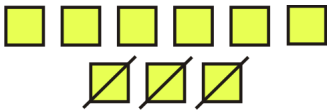
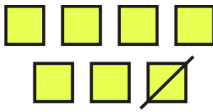
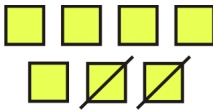
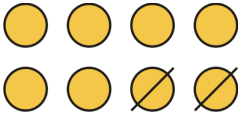
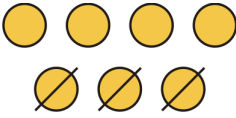
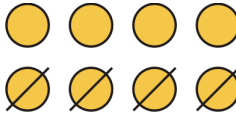
Six minus one equals five

1. Cross out objects. How many are left? Read each subtraction sentence aloud using the words "minus" and "equals".

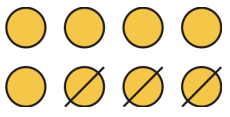
<p>10 in total. Cross out 4. How many are left?</p>  <p>a. $10 - 4 = \underline{\quad}$</p>	<p>6 in total. Cross out 6. How many are left?</p>  <p>b. $6 - 6 = \underline{\quad}$</p>	<p>8 in total. Cross out 2. How many are left?</p>  <p>c. $8 - 2 = \underline{\quad}$</p>
<p>8 in total, cross out 7.</p>  <p>d. $8 - 7 = \underline{\quad}$</p>	<p>8 in total, cross out 6.</p>  <p>e. $8 - 6 = \underline{\quad}$</p>	<p>7 in total, cross out 3.</p>  <p>f. $7 - 3 = \underline{\quad}$</p>

<p>9 in total, cross out 3.</p>  <p>g. $9 - 3 = \underline{\quad}$</p>	<p>6 in total, cross out 2.</p>  <p>h. $6 - 2 = \underline{\quad}$</p>	<p>10 in total, cross out 7.</p>  <p>i. $10 - 7 = \underline{\quad}$</p>
<p>Cross out 5.</p>  <p>j. $9 - 5 = \underline{\quad}$</p>	<p>Cross out 4.</p>  <p>k. $8 - 4 = \underline{\quad}$</p>	<p>Cross out 5.</p>  <p>l. $10 - 5 = \underline{\quad}$</p>
 <p>m. $6 - 3 = \underline{\quad}$</p>	 <p>n. $6 - 5 = \underline{\quad}$</p>	 <p>o. $5 - 5 = \underline{\quad}$</p>


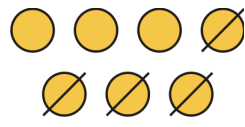
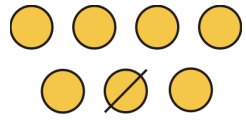
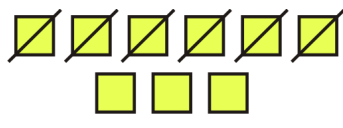
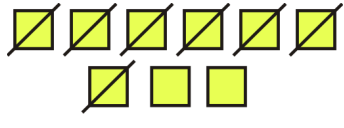
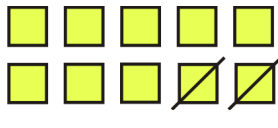
2. Subtract. Cover the crossed-out objects with your finger to see how many are left.
Read each sentence using the words "minus" and "equals".

 <p>a. $5 - 1 = \underline{\quad}$</p>	 <p>b. $6 - 3 = \underline{\quad}$</p>	 <p>c. $5 - 3 = \underline{\quad}$</p>
 <p>d. $4 - 1 = \underline{\quad}$</p>	 <p>e. $5 - 2 = \underline{\quad}$</p>	 <p>f. $6 - 2 = \underline{\quad}$</p>
 <p>g. $9 - 3 = \underline{\quad}$</p>	 <p>h. $7 - 1 = \underline{\quad}$</p>	 <p>i. $7 - 2 = \underline{\quad}$</p>
 <p>j. $8 - 2 = \underline{\quad}$</p>	 <p>k. $7 - 3 = \underline{\quad}$</p>	 <p>l. $8 - 4 = \underline{\quad}$</p>

3. Draw small circles to illustrate the numbers and cross out some of them to match the subtraction problem.

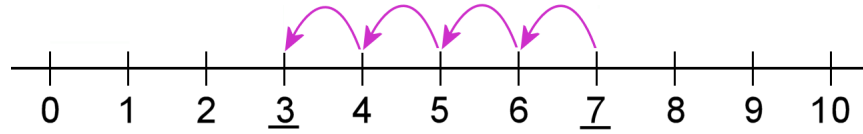
 <p>a. $8 - 3 = \underline{\quad}$</p>	<p>b. $5 - 1 = \underline{\quad}$</p>	<p>c. $10 - 7 = \underline{\quad}$</p>
<p>d. $7 - 2 = \underline{\quad}$</p>	<p>e. $10 - 1 = \underline{\quad}$</p>	<p>f. $9 - 7 = \underline{\quad}$</p>
<p>g. $6 - 3 = \underline{\quad}$</p>	<p>h. $7 - 3 = \underline{\quad}$</p>	<p>i. $10 - 4 = \underline{\quad}$</p>
<p>j. $9 - 5 = \underline{\quad}$</p>	<p>k. $10 - 6 = \underline{\quad}$</p>	<p>l. $6 - 4 = \underline{\quad}$</p>

4. Write a subtraction sentence to match the picture.

 <p>a. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>	 <p>b. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>
 <p>c. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>	 <p>d. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>
 <p>e. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>	 <p>f. $\underline{\quad} - \underline{\quad} = \underline{\quad}$</p>

Count Down to Subtract

Count 4 steps backwards from 7. You end up at 3.

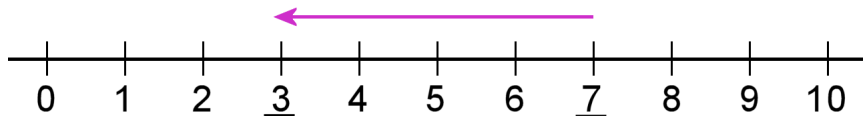


$$7 - 4 = 3$$

“Seven” “Six, five, four, three.”

Start. Count down FOUR steps.

You can also use a single arrow:



1. Draw steps (or a single arrow) to illustrate the subtraction sentence.

a. $7 - 2 =$ _____

b. $8 - 4 =$ _____

c. $6 - 5 =$ _____

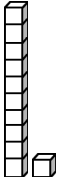
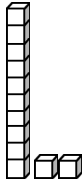
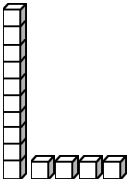
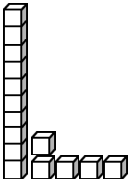
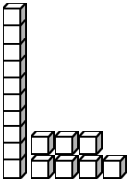
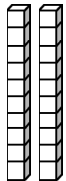
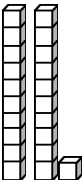
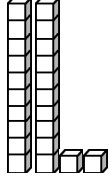
d. $9 - 3 =$ _____

e. $10 - 3 =$ _____

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Building Numbers 11-40

1. Fill in the table. Think of the “+” sign as “and”: 10 + 3 means 10 *and* 3.





<p>a. <u>Eleven</u></p>  $\begin{array}{r} \underline{10} + \underline{1} \\ \text{tens} \quad \text{ones} \\ \boxed{1} \quad \boxed{1} \end{array}$	<p>b. _____</p>  $\begin{array}{r} \underline{\quad} + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$
<p>c. _____</p>  $\begin{array}{r} \underline{\quad} + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$	<p>d. _____</p>  $\begin{array}{r} \underline{\quad} + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$
<p>e. _____</p>  $\begin{array}{r} \underline{\quad} + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$	<p>f. <u>Twenty</u></p>  $\begin{array}{r} 20 + \underline{0} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$
<p>g. <u>Twenty-one</u></p>  $\begin{array}{r} 20 + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$	<p>h. _____</p>  $\begin{array}{r} 20 + \underline{\quad} \\ \text{tens} \quad \text{ones} \\ \boxed{\quad} \quad \boxed{\quad} \end{array}$

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Tally Marks

1. **Tally marks.** Tally marks are counting marks. When people count they make one tally mark for each thing they count. For one item or thing, draw one tally mark as “|”. The fifth tally mark is drawn across the four others like “”.

Write the number that matches the tally.

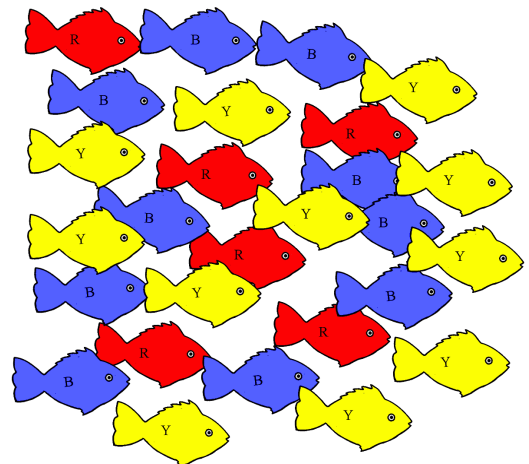
			
a. _____	b. _____	c. _____	d. _____

2. Draw tally marks for these numbers.

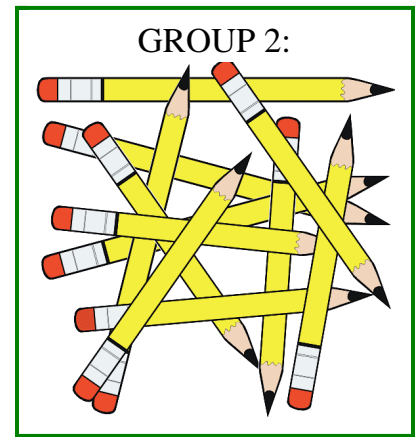
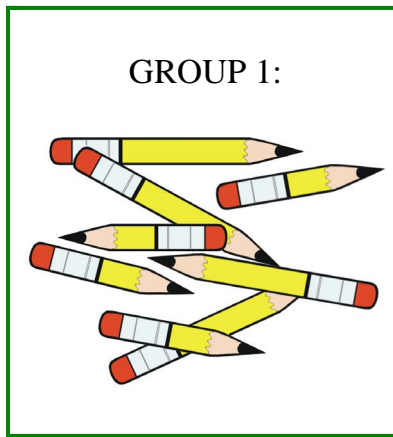
a. 7	b. 14
c. 16	d. 32
e. 41	f. 28

3. Count the fish. Use tally marks to keep track. Mark each fish you count and make a tally mark for it. That way you won't count the same fish twice. Then write the number under “Count”.

	Tally Marks	Count
Red		
Blue		
Yellow		



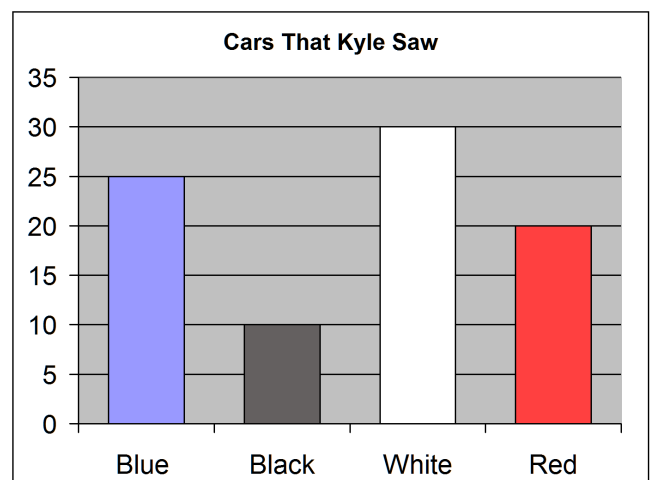
4. Count the pencils in each group. Use tally marks to keep track. Mark each pencil as you count it, and make a tally mark in the box. That way you won't count the same pencil twice.



	Tally Marks	Count
Group 1		
Group 2		

5. Do the tally marks show the same counts that the bar graph does? If not, correct the tally.

	Tally Marks
Blue	
Black	
White	
Red	



6. (Optional) Tally marks are most useful for counting things that are happening rather slowly, for example, birds that fly into the yard. For this project, count something using tally marks. For example, you could go outside and count how many red and how many gray cars you see pass by your house in 20 minutes.

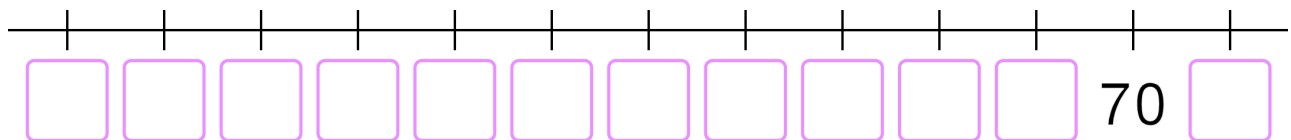
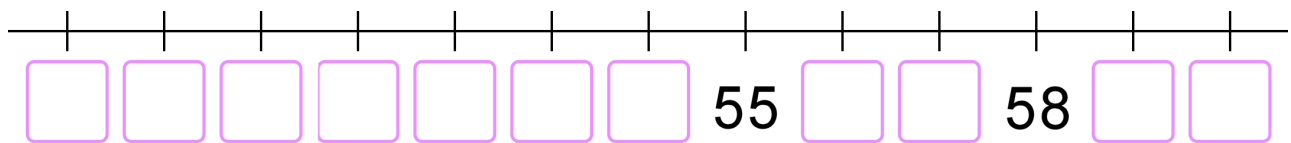
	Tally Marks	Count
Group 1		
Group 2		

Review Chapter 3

1. Name the numbers using numbers and words.

- a. 1 ten 5 ones 15 _____
- b. 6 tens 7 ones _____ _____
- c. 4 tens 0 ones _____ _____
- d. 10 tens 0 ones _____ _____
- e. 5 tens 1 one _____ _____

2. Fill in the numbers missing from the number lines.



3. Circle the number that is *more*.

a.	b.	c.	d.	e.
78 87	22 25	56 57	68 80	101 11

4. Count. You can also say this aloud with your teacher.

97, 98, _____, _____, _____, _____, _____,

_____, _____, _____, _____, _____, _____.

5. Break the numbers into their tens and ones.

a. $45 = 40 + 5$	b. $25 = \underline{\quad} + \underline{\quad}$	c. $78 = \underline{\quad} + \underline{\quad}$
$68 = \underline{\quad} + \underline{\quad}$	$54 = \underline{\quad} + \underline{\quad}$	$91 = \underline{\quad} + \underline{\quad}$

6. Build the numbers.

a. $50 + 7 = \underline{\quad}$	b. $8 + 10 = \underline{\quad}$	c. $90 + 6 = \underline{\quad}$
$20 + 0 = \underline{\quad}$	$9 + 70 = \underline{\quad}$	$9 + 60 = \underline{\quad}$

7. Put the numbers in order.


a. 57, 17, 75	b. 18, 48, 44, 41
$\underline{\quad} < \underline{\quad} < \underline{\quad}$	$\underline{\quad} < \underline{\quad} < \underline{\quad} < \underline{\quad}$

8. Compare the expressions and write $<$, $>$ or $=$.

- a. $56 \square 5 + 60$ b. $20 + 8 \square 33$ c. $60 + 5 \square 50 + 6$
- d. $34 \square 30 + 6$ e. $4 + 90 \square 49$ f. $80 + 2 \square 70 + 9$

9. Skip-count. (You can say this aloud with your teacher.)

- a. 13, 15, 17, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$
- b. $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, 78, 88, 98
- c. $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, $\underline{\quad}$, 55, 60, 65, $\underline{\quad}$

 <p>Mystery Number</p>	<p><i>I have five fewer ones than 39, and one more ten than 47.</i></p>
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