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Foreword

Math Mammoth Grade 2 comprises a complete math curriculum for the second grade mathematics studies. The curriculum meets and exceeds the Common Core standards.

The main areas of study for second grade are:

1. Understanding of the base-ten system within 1000. This includes place value with three-digit numbers, skip-counting in fives, tens, and multiples of hundreds, tens, and ones (within 1000) (chapters 6 and 8);
2. Develop fluency with addition and subtraction, including solving word problems, regrouping in addition, and regrouping in subtraction (chapters 1, 3, 4, and 8);
3. Using standard units of measure (chapter 7);
4. Describing and analyzing shapes (chapter 5).

Additional topics we study are time, money, introduction to multiplication, and bar graphs and picture graphs.

This book, 2-B, covers three-digit numbers (chapter 6), measuring (chapter 7), regrouping in addition and subtraction (chapter 8), counting coins (chapter 9), and an introduction to multiplication (chapter 10). The rest of the topics are covered in the 2-A student worktext.

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/>

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 6: Three-Digit Numbers

Introduction

This sixth chapter of *Math Mammoth Grade 2* deals with numbers up to one thousand and with place value.

The first three lessons provide the basis for understanding three-digit numbers, by using a visual model of hundred-flats, ten-pillars, and one-cubes. If you prefer, you can use manipulatives instead (base ten blocks). Students also place three-digit numbers on the number line, and in the following lesson, *Forming Numbers—and Breaking Them Apart*, practice writing numbers in expanded form.

Next, it is time to study *Skip-Counting by Tens*, and soon also by twos and fives. Following that, students compare and order three-digit numbers.

After this, it is time for some mental math. First, students add and subtract multiples of hundred using mental math (e.g. $200 + 500$). They complete the next hundred (e.g. $260 + \underline{\quad} = 300$), and add and subtract multiples of tens. Along the way, the lessons also present word problems and other types of problems.

The chapter ends with some bar graphs and pictographs, which provide a nice application for the recently learned three-digit numbers.

A friendly reminder: at <https://www.mathmammoth.com/videos/> you will find free videos matching the curriculum (choose 2nd grade). Also, don't automatically assign all the problems and exercises, but use your judgment. Many children can learn these topics perfectly fine by doing about half of the exercises.

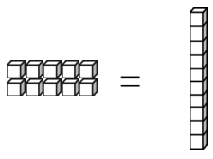
Pacing Suggestion for Chapter 6

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, second graders should finish 8-10 pages a week. Please also see the user guide at <https://www.mathmammoth.com/userguides/>.

The Lessons in Chapter 6	page	span	suggested pacing	your pacing
Three-Digit Numbers	10	4 pages	2 days	
Hundreds on the Number Line	14	2 pages	1 day	
Forming Numbers—and Breaking Them Apart	16	2 pages	1 day	
Skip-Counting by Tens	18	3 pages	1 day	
More Skip-Counting	21	2 pages	1 day	
Which Number Is Greater?	23	3 pages	2 days	
Comparing Numbers and Some Review	26	3 pages	2 days	
Add and Subtract Whole Hundreds	29	2 pages	1 day	
Practice with Whole Hundreds	31	3 pages	2 days	
Completing the Next Hundred	34	3 pages	2 days	
Adding Whole Tens	37	3 pages	1 day	
Subtract Whole Tens	40	3 pages	2 days	
Patterns and Problems	43	3 pages	2 days	
Bar Graphs and Pictographs	46	4 pages	2 days	
Mixed Review Chapter 6	50	2 pages	1 day	
Review Chapter 6	52	3 pages	2 days	
Chapter 6 Test (optional)				
TOTALS		45 pages	25 days	

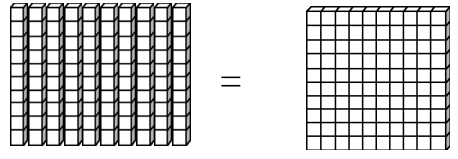
Three-Digit Numbers

Ten ones make a ten:



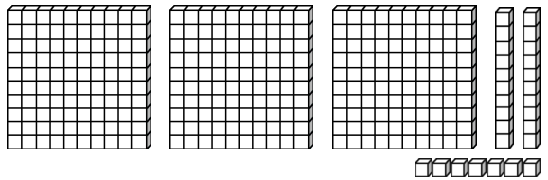
10 ones = 10

Ten ten-pillars make ONE HUNDRED:



10 tens = 100

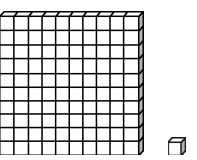
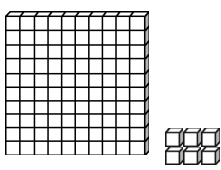
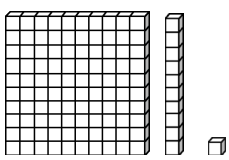
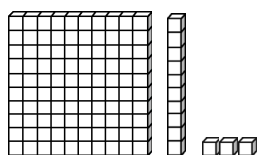
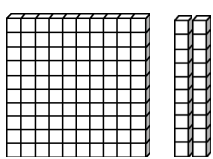
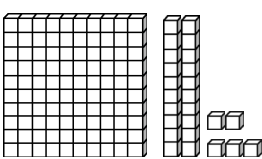
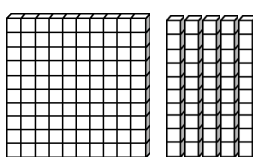
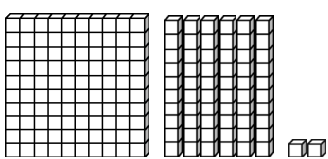
Write hundreds, tens, and ones in their own columns:



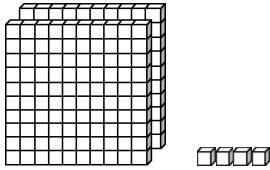
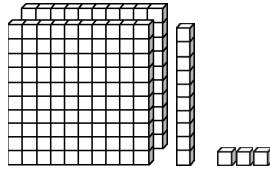
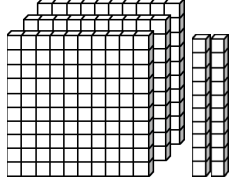
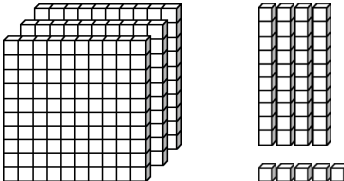
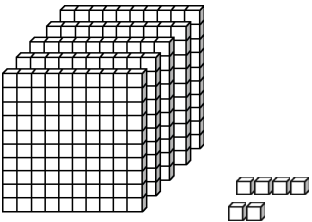
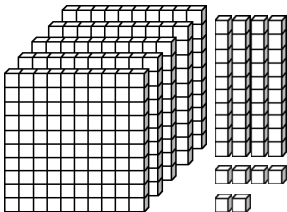
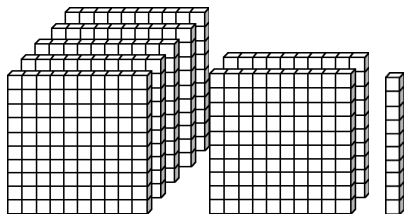
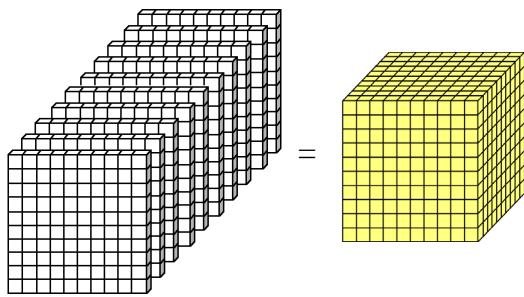
hundreds	tens	ones
3	2	7

three hundred twenty-seven

1. Count the ones, tens, and hundreds, and fill in the missing parts.

<p>a. one hundred one</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> </table>	1	0	1	<p>b. one hundred six</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>c. one hundred eleven</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td>1</td> <td>1</td> <td>1</td> </tr> </table>	1	1	1	<p>d. one hundred thirteen</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>			
1	0	1													
1	1	1													
<p>e. one hundred twenty</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>f. one hundred twenty-five</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>g. one hundred fifty</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<p>h. one hundred sixty-two</p>  <p>hundreds tens ones</p> <table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>			

2. Count the ones, tens, and hundreds, and fill in the missing parts.

<p>a. <u>two hundred</u></p> <p style="text-align: center;"><u>four</u></p>  <p style="text-align: center;">hundreds tens ones</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;">2</td> <td style="width: 33px; height: 33px;">0</td> <td style="width: 33px; height: 33px;">4</td> </tr> </table>	2	0	4	<p>b. <u>two hundred</u></p> <p style="text-align: center;"><u>thirteen</u></p>  <p style="text-align: center;">hundreds tens ones</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>				<p>c. _____</p> <p style="text-align: center;">_____</p>  <p style="text-align: center;">hundreds tens ones</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>			
2	0	4									
<p>d. _____</p> <p style="text-align: center;">_____</p>  <p style="text-align: center;">H T O</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>				<p>e. _____</p> <p style="text-align: center;">_____</p>  <p style="text-align: center;">H T O</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>				<p>f. _____</p> <p style="text-align: center;">_____</p>  <p style="text-align: center;">H T O</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>			
<p>g. _____</p>  <p style="text-align: center;">H T O</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> <td style="width: 33px; height: 33px;"></td> </tr> </table>				<p>h. <u>Ten hundreds = One thousand</u></p>  <p style="text-align: center;">Th H T O</p> <table border="1" style="margin-left: auto; margin-right: auto; text-align: center;"> <tr> <td style="width: 33px; height: 33px;">1</td> <td style="width: 33px; height: 33px;">0</td> <td style="width: 33px; height: 33px;">0</td> <td style="width: 33px; height: 33px;">0</td> </tr> </table>	1	0	0	0			
1	0	0	0								

3. Write a sum of the hundreds, tens, and ones shown in the picture.
Also write the number.

a.

_____ + _____ + _____

H T O

--	--	--

b.

_____ + _____ + _____

H T O

--	--	--

c.

_____ + _____ + _____

H T O

--	--	--

d.

_____ + _____ + _____

H T O

--	--	--

Notice: There are NO ones.
Write a zero for ones in the sum.

e.

_____ + _____ + 0

H T O

--	--	--

Notice: There are NO tens.
Write a zero for tens in the sum.

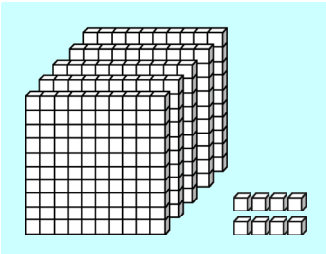
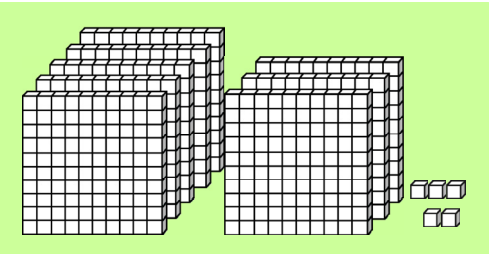
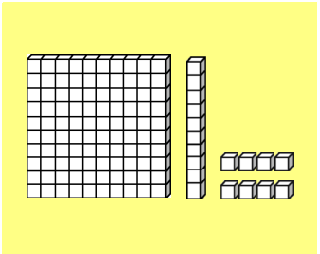
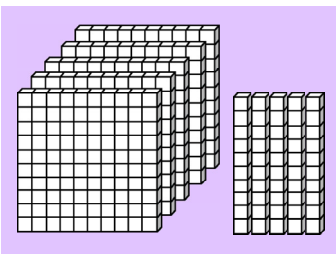
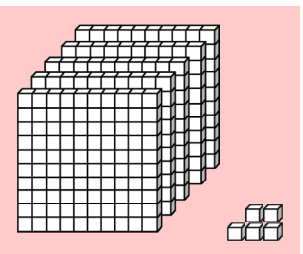
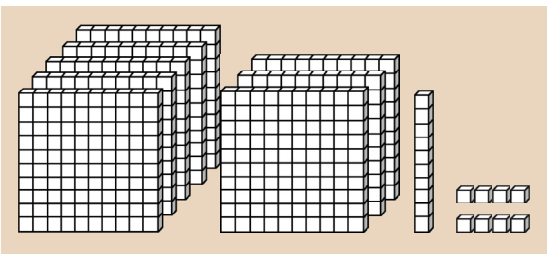
f.

_____ + 0 + _____



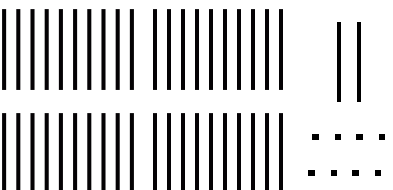
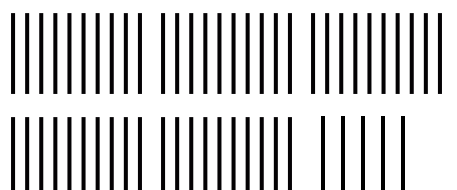
H T O

--	--	--

4. Match the numbers, number names, and the sums to the correct pictures.

118	505	818	550	508	805
					
eight hundred five	five hundred fifty	one hundred eighteen	$500 + 8$	$500 + 5$	$800 + 10 + 8$

5. The dots are ones, the pillars are tens. Group together 10 ten-pillars to make a hundred.

<p>a. </p> <p style="text-align: center;"><u>235</u></p>	<p>b. </p> <p style="text-align: center;">_____</p>
<p>c. </p> <p style="text-align: center;">_____</p>	<p>d. </p> <p style="text-align: center;">_____</p>

How many tens are in a thousand?

Fuzzle Corner

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Patterns and Problems

1. Three children played a card game where you get points for the cards left in your hand. The person who has the least points at the end of the game is the winner. The table shows the point count at a certain time in the game:

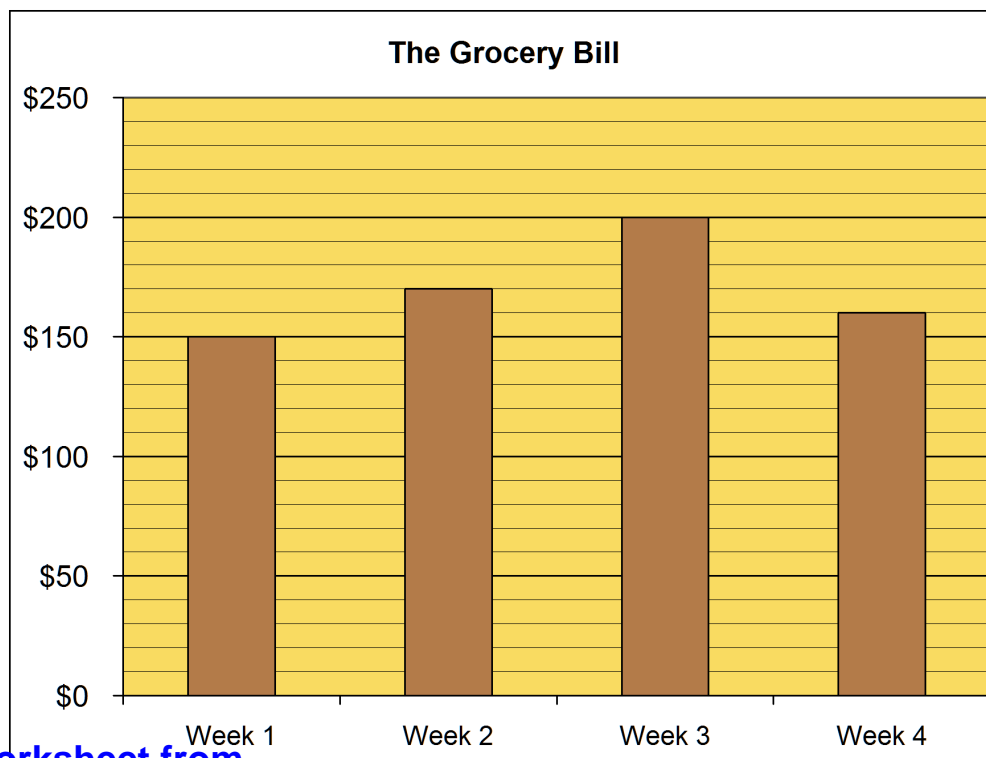
Then, Dan got 100 more points and Bill got 30 more points (Jim got none).

Add those to their point counts and write the new point counts in the grid.

The game ended now. Who won?

Jim	Dan	Bill
540	270	330

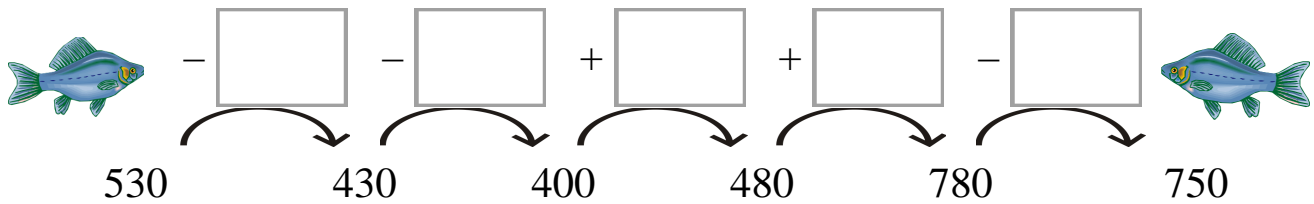
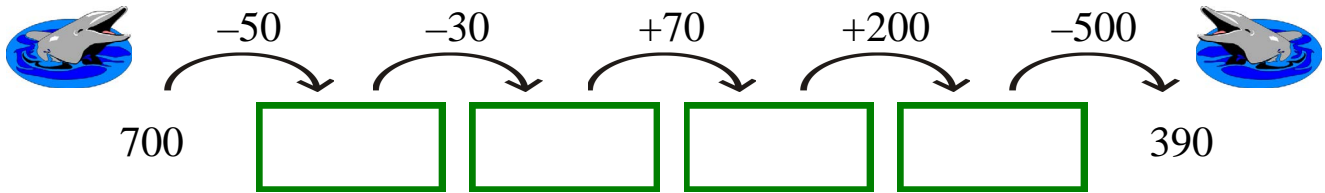
2. The bar graph shows how much money the Riley family spent for groceries in four different weeks.
- Mark above each bar how much they spent for groceries in dollars.
 - How much more did they pay for week 3 than for week 4?
 - How much more did they pay for week 2 than for week 1?



3. Count by 20s, and fill in the grid.

520	540	560		
620				
820				
				1000

4. Fill in.



5. Continue the patterns!

a. $590 - 60 = \underline{\hspace{2cm}}$

$590 - 70 = \underline{\hspace{2cm}}$

$590 - 80 = \underline{\hspace{2cm}}$

$590 - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

$590 - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

$590 - \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

b. $770 + 10 = \underline{\hspace{2cm}}$

$770 + 20 = \underline{\hspace{2cm}}$

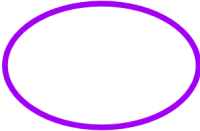
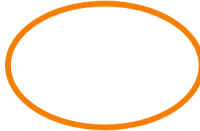
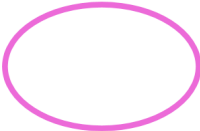
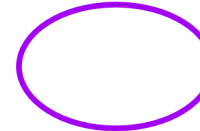
$770 + 30 = \underline{\hspace{2cm}}$


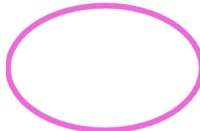
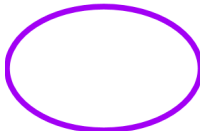

$770 + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$


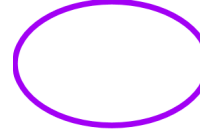

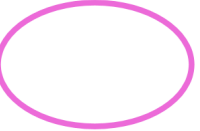
$770 + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

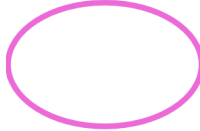
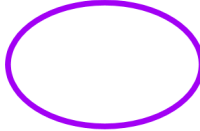
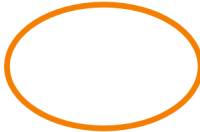
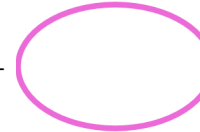
$770 + \underline{\hspace{1cm}} = \underline{\hspace{2cm}}$

6. Find what number goes in the oval.

Subtractions where the TOTAL is missing:	a.  - 60 = 220	b.  - 80 = 510
	c.  - 500 = 100	d.  - 310 = 60

e. 450 +  = 750	f. 716 +  = 776	"How many more" additions
g. 530 +  = 590	h. 637 +  = 697	

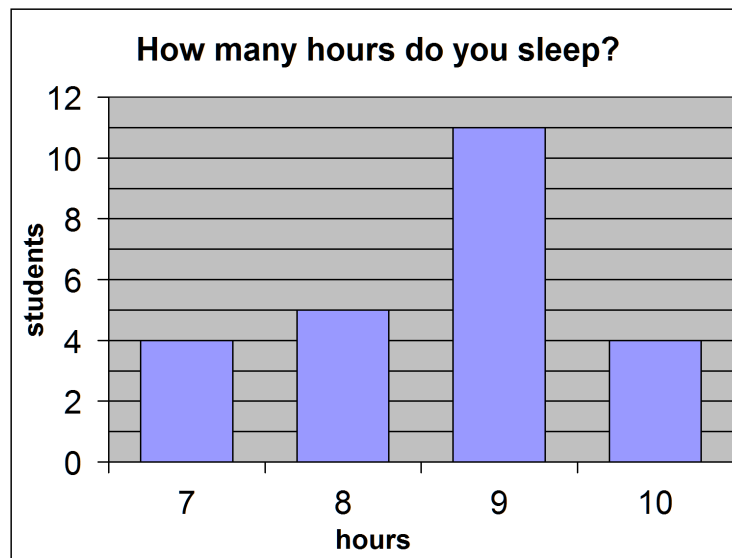
What was subtracted is missing:	i. 1000 -  = 700	j. 740 -  = 40
	k. 667 -  = 607	l. 999 -  = 299


Find what number goes into the oval!		Puzzle Corner
a. 980 - 200 -  = 80	b. 784 -  - 40 = 704	
c. 210 + 50 +  = 310	d. 600 +  + 30 = 720	

Bar Graphs and Pictographs

Bar graphs use “bars” or rectangles in them to show some information.

1. This bar graph shows how many hours some second grade students slept last night.




- a. How many students slept 8 hours last night?
- b. How many students slept 10 hours last night?
- c. *How many more* students slept 9 hours than the ones who slept 10 hours?
- d. A school nurse said that children need to sleep well for at least 8 hours. How many students slept *less than* 8 hours last night?
- e. How many students slept *at least* 8 hours last night?
- f. Make a pictograph. Draw ONE sleepy face  to mean 2 students.

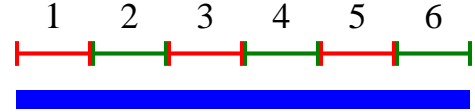
	Students
Students who slept less than 8 hours	
Students who slept at least 8 hours	

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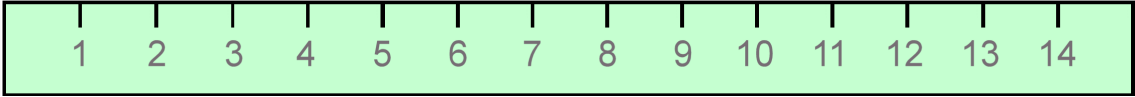

Measuring to the Nearest Centimeter

Remember? We can measure how long things are using *centimeters*.

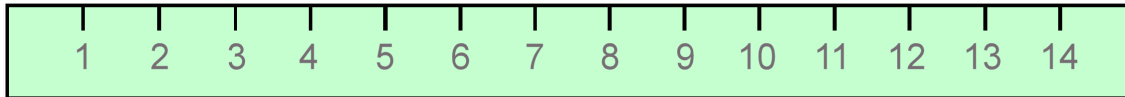
This line is 1 centimeter long: 
 A centimeter is written in short form as "cm."
 The blue line on the right is 6 cm long. →



1. How many centimeters long are these lines?

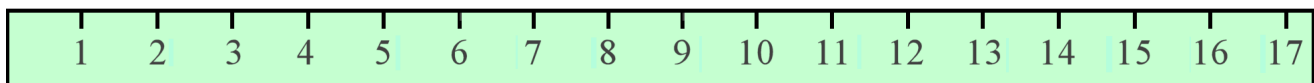
<p>a.  _____ cm</p>	<p>b.  _____ cm</p>
<p>c.  _____ cm</p> 	
<p>d.  _____ cm</p>	

2. Measure the pencils with a centimeter ruler. If you don't have one, you can cut out the one from the bottom of this page. Then answer the questions.



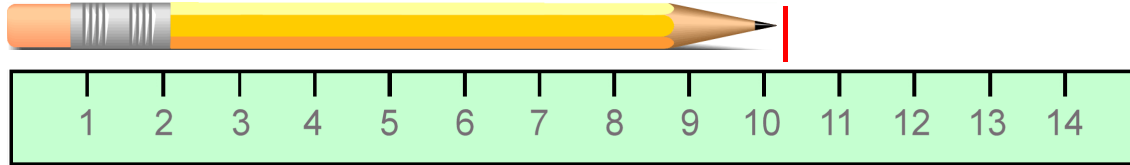
a. How much longer is pencil #1 than pencil #2? _____ cm

b. How much longer is pencil #3 than pencil #2? _____ cm

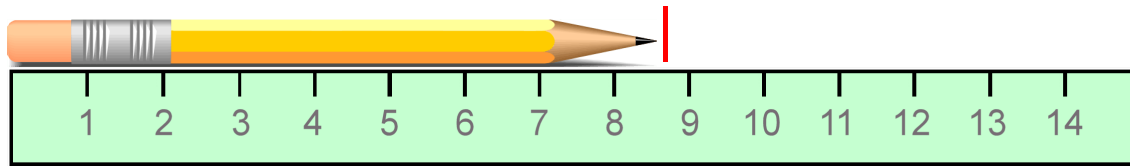


Most things are NOT exactly a certain number of whole centimeters. You can measure them to the nearest centimeter.

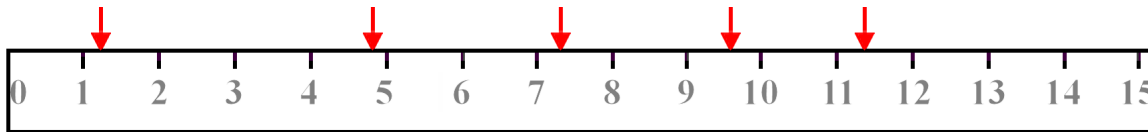
The pencil below is a little over 10 cm long. It is *about 10 cm* long.



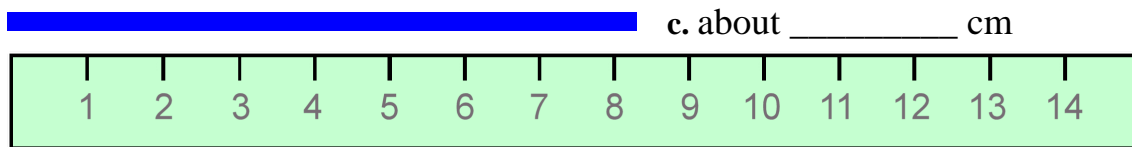
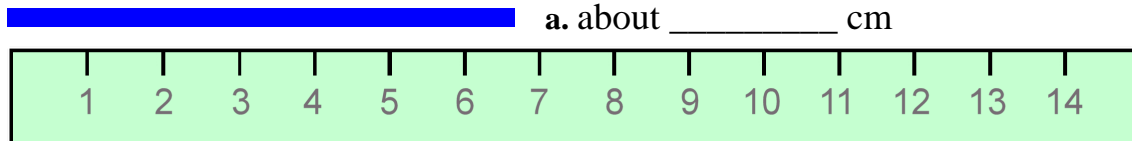
This pencil is about 9 cm long. The end of the pencil is closer to 9 cm than to 8 cm.




3. Circle the number that is nearest to each arrow.



4. Measure the lines to the nearest centimeter.



5. This line is 1 cm long: . Your finger is probably about that wide; put it on top of the 1-cm line and check! Guess how long these lines are. Then measure.

	<u>My guess:</u>	<u>Measurement:</u>
a. _____	about _____ cm	about _____ cm
b. _____	about _____ cm	about _____ cm
c. _____	about _____ cm	about _____ cm

6. a. Find two small objects. Measure to find *about* how many centimeters longer one is than the other.

The _____ is *about* _____ cm longer than the _____.

b. Find other two small objects. Measure to find *about* how many centimeters longer one is than the other.

The _____ is *about* _____ cm longer than the _____.

7. Draw some lines here or on blank paper. Use a ruler. Hold the ruler down tight with one hand, while drawing the line with the other. It takes some practice!

a. 6 cm long



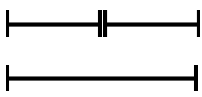

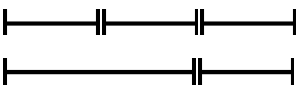
b. 3 cm long

c. 12 cm long





8. Find some small objects. First GUESS how long or tall they are. Then measure. If the item is not exactly so-many centimeters long, then measure it to the nearest centimeter and write “about” before the centimeter-amount, such as *about 8 cm*.

Item	GUESS	MEASUREMENT
	cm	cm
	cm	cm
	cm	cm
	cm	cm
	cm	cm


Inches and Half-Inches

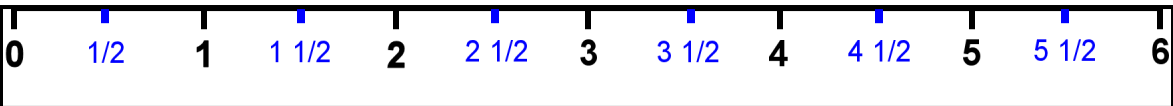
 This line is 1 inch long.  This line is $\frac{1}{2}$ inch long.	 Two half-inches make an inch!
 <p>3 inches and a $\frac{1}{2}$-inch = $3\frac{1}{2}$ inches (three and a half inches)</p>	 <p>three half-inches = $1\frac{1}{2}$ inches (one and a half inches)</p>


1. How long are the lines of inches and half-inches when placed end-to-end?

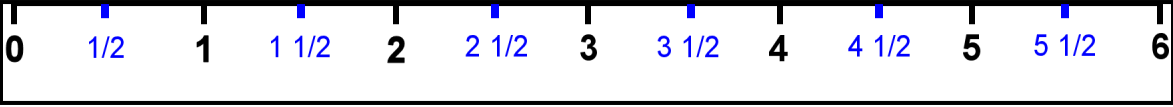
- a.  _____ inches
- b.  _____ inches
- c.  _____ inches
- d.  _____ in.


2. How long are these things in inches?

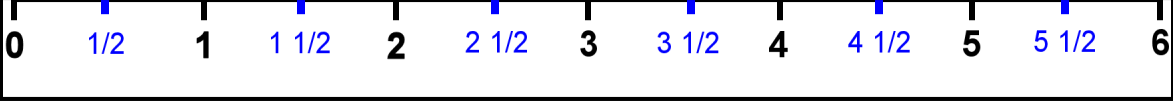
a.  _____ inches



b.  _____ inches



c.  _____ inches

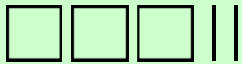


You can cut out one of the rulers in this lesson and tape it on an existing ruler or cardboard after you have finished the exercises on this and the next page!

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Regrouping One Hundred As 10 Tens

We need to subtract 170....
but we cannot take away
seven tens because there
are only two tens.



320

→

“Break down” one HUNDRED as 10
tens. Now we can subtract! Take away
1 hundred and 7 tens.

What is left? _____

→



→

2 hundreds + 12 tens

1. Break down one hundred into 10 tens (regroup). Draw squares for hundreds, sticks for tens, and dots for ones. Then take away (subtract) what is asked.

a.



340

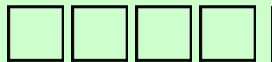
→



_____ hundreds + _____ tens

Take away 180. What is left? _____

b.



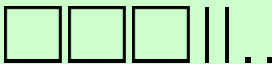
410

→

_____ hundreds + _____ tens

Take away 250. What is left? _____

c.



322

→

_____ hundreds + _____ tens + _____ ones

Take away 171. What is left? _____

d.



254

→

_____ hundreds + _____ tens + _____ ones

Take away 174. What is left? _____

2. First, regroup 1 hundred as ten tens. Then subtract.

a. 4 hundreds 5 tens 7 ones \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{ones} \\ - 2 \text{hundreds} \text{tens} \text{ones} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

b. 7 hundreds 2 tens 1 one \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{one} \\ - 3 \text{hundreds} \text{tens} \text{one} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

c. 3 hundreds 2 tens 0 ones \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{ones} \\ - 2 \text{hundreds} \text{tens} \text{ones} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

d. 7 hundreds 0 tens 6 ones \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{ones} \\ - 6 \text{hundreds} \text{tens} \text{ones} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

e. 8 hundreds 0 tens 3 ones \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{ones} \\ - 5 \text{hundreds} \text{tens} \text{one} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

3. How to regroup when subtracting $947 - 282$ (below)? Fill in Jill's explanation.

It would be easy, except I cannot subtract ___ tens from ___ tens. So, I need to take one of the ___ hundreds and break it down as tens. So, now I will have only ___ hundreds but I will now get ___ tens. Now I can subtract.

9 hundreds 4 tens 7 ones \Rightarrow

$$\begin{array}{r} \text{hundreds} \text{tens} \text{ones} \\ - 2 \text{hundreds} \text{tens} \text{ones} \\ \hline \text{hundred} \text{tens} \text{ones} \end{array}$$

Compare how we write the regrouping when subtracting in columns.

$$\begin{array}{r}
 5 \text{ hundreds } 4 \text{ tens } 7 \text{ ones} \Rightarrow \\
 \begin{array}{r}
 4 \text{ hundreds } 14 \text{ tens } 7 \text{ ones} \\
 - 1 \text{ hundred } 5 \text{ tens } 2 \text{ ones} \\
 \hline
 3 \text{ hundreds } 9 \text{ tens } 5 \text{ ones}
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 4 \ 14 \\
 5 \ 4 \ 7 \\
 - 1 \ 5 \ 2 \\
 \hline
 3 \ 9 \ 5
 \end{array}$$

4. Fill in. Subtract both ways.

a.

$$\begin{array}{r}
 4 \text{ hundreds } 5 \text{ tens } 6 \text{ ones} \Rightarrow \\
 \begin{array}{r}
 \square \text{ hundreds } \square \text{ tens } \square \text{ ones} \\
 - 2 \text{ hundreds } 7 \text{ tens } 2 \text{ ones} \\
 \hline
 \square \text{ hundreds } \square \text{ tens } \square \text{ ones}
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 4 \ 5 \ 6 \\
 - 2 \ 7 \ 2 \\
 \hline
 \end{array}$$

b.

$$\begin{array}{r}
 6 \text{ hundreds } 0 \text{ tens } 5 \text{ ones} \Rightarrow \\
 \begin{array}{r}
 \square \text{ hundreds } \square \text{ tens } \square \text{ ones} \\
 - 4 \text{ hundreds } 3 \text{ tens } 3 \text{ ones} \\
 \hline
 \square \text{ hundreds } \square \text{ tens } \square \text{ ones}
 \end{array}
 \end{array}$$

$$\begin{array}{r}
 6 \ 0 \ 5 \\
 - 4 \ 3 \ 3 \\
 \hline
 \end{array}$$

5. Subtract.

a.

$$\begin{array}{r}
 9 \ 2 \ 6 \\
 - 1 \ 4 \ 6 \\
 \hline
 \end{array}$$

b.

$$\begin{array}{r}
 5 \ 2 \ 9 \\
 - 9 \ 5 \\
 \hline
 \end{array}$$

c.

$$\begin{array}{r}
 4 \ 1 \ 4 \\
 - 3 \ 2 \ 2 \\
 \hline
 \end{array}$$

d.

$$\begin{array}{r}
 7 \ 7 \ 3 \\
 - 5 \ 3 \ 6 \\
 \hline
 \end{array}$$

e.

$$\begin{array}{r}
 6 \ 7 \ 0 \\
 - 2 \ 2 \ 6 \\
 \hline
 \end{array}$$

f.

$$\begin{array}{r}
 7 \ 0 \ 8 \\
 - 1 \ 5 \ 6 \\
 \hline
 \end{array}$$

g.

$$\begin{array}{r}
 5 \ 0 \ 3 \\
 - 3 \ 4 \ 1 \\
 \hline
 \end{array}$$

h.

$$\begin{array}{r}
 7 \ 4 \ 8 \\
 - 3 \ 7 \ 6 \\
 \hline
 \end{array}$$

6. Solve the problems.

- a. Max has two books to read. The first book has 270 pages, and the second book has 60 fewer pages than the first. How many pages does the second book have?

- b. Liz and Hannah played a game. Hannah got 192 points and Liz got 433 points. How many more points did Liz get than Hannah?

<hr/>		

- c. Again, Liz and Hannah played a game. This time Liz got 215 points and Hannah got 93 points more than Liz. So, how many points did Hannah get?

<hr/>		

- d. Denny and Micah dug up some worms for bait before they went fishing. Denny got 14 worms, which was 11 fewer worms than what Micah got. How many worms did Micah get?

What was the total number of worms that both boys got?

Puzzle Corner

Figure out the missing numbers in these subtractions!
You might need to regroup.

$$\begin{array}{r} \square \square 5 \\ - 15 \square \\ \hline 292 \end{array}$$

$$\begin{array}{r} 6 \square 4 \\ - \square 5 \square \\ \hline 326 \end{array}$$

$$\begin{array}{r} 9 \square \square \\ - \square 5 5 \\ \hline 726 \end{array}$$

$$\begin{array}{r} 96 \square \\ - \square 5 5 \\ \hline 5 \square 5 \end{array}$$

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Review Chapter 8

1. Add.

a.

$$\begin{array}{r} 215 \\ + 477 \\ \hline \end{array}$$

b.

$$\begin{array}{r} 192 \\ + 225 \\ \hline \end{array}$$

c.

$$\begin{array}{r} 303 \\ 128 \\ + 287 \\ \hline \end{array}$$

d.

$$\begin{array}{r} 409 \\ 219 \\ + 136 \\ \hline \end{array}$$

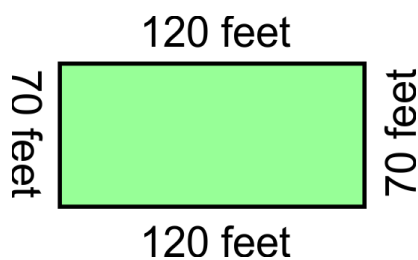
2. Sarah bought three bicycles for her children.
Each bicycle cost \$154.
How much was the total cost?

+		
<hr/>		

3. Add mentally. THINK of the new hundred you might get from adding the tens.

a.	b.	c.
$80 + 40 = \underline{\hspace{2cm}}$	$90 + 90 = \underline{\hspace{2cm}}$	$690 + 50 = \underline{\hspace{2cm}}$
$780 + 40 = \underline{\hspace{2cm}}$	$240 + 50 = \underline{\hspace{2cm}}$	$470 + 80 = \underline{\hspace{2cm}}$

4. Find how many feet it is if you walk all of the way around this rectangle.



+		
<hr/>		

5. Subtract. Regroup if necessary. Check each subtraction by *adding your answer and the number you subtracted*.

<p>a.</p> $\begin{array}{r} 88 \\ - 54 \\ \hline \end{array}$ $\begin{array}{r} + 54 \\ \hline \end{array}$	<p>b.</p> $\begin{array}{r} 63 \\ - 48 \\ \hline \end{array}$ $\begin{array}{r} + \\ \hline \end{array}$
<p>c.</p> $\begin{array}{r} 84 \\ - 49 \\ \hline \end{array}$ $\begin{array}{r} + \\ \hline \end{array}$	<p>d.</p> $\begin{array}{r} 882 \\ - 159 \\ \hline \end{array}$ $\begin{array}{r} + \\ \hline \end{array}$
<p>e.</p> $\begin{array}{r} 556 \\ - 391 \\ \hline \end{array}$ $\begin{array}{r} + \\ \hline \end{array}$	<p>f.</p> $\begin{array}{r} 550 \\ - 246 \\ \hline \end{array}$ $\begin{array}{r} + \\ \hline \end{array}$

6. Subtract using mental math methods.

<p>a. $15 - 7 = \underline{\quad}$</p> <p>$55 - 7 = \underline{\quad}$</p>	<p>b. $13 - 5 = \underline{\quad}$</p> <p>$93 - 5 = \underline{\quad}$</p>	<p>c. $82 - 77 = \underline{\quad}$</p> <p>$45 - 41 = \underline{\quad}$</p>
<p>d. $80 - 71 = \underline{\quad}$</p> <p>$100 - 95 = \underline{\quad}$</p>	<p>e. $56 - 40 = \underline{\quad}$</p> <p>$56 - 43 = \underline{\quad}$</p>	<p>f. $78 - 35 = \underline{\quad}$</p> <p>$33 - 4 = \underline{\quad}$</p>

7. Find what numbers are missing.

a.

$$\begin{array}{r} 2 \blacksquare 4 \\ + 477 \\ \hline 731 \end{array}$$

b.

$$\begin{array}{r} 5 \blacksquare 9 \\ + \blacksquare 25 \\ \hline 914 \end{array}$$

c.

$$\begin{array}{r} 20 \blacksquare \\ + 6 \blacksquare 6 \\ \hline 892 \end{array}$$

d.

$$\begin{array}{r} 68 \blacksquare \\ + \blacksquare 19 \\ \hline 900 \end{array}$$

8. Solve.

- a. Some people are riding on the bus. At the bus stop, 13 people get on. Now there are 52 people on the bus. How many were there originally?

<hr/>	

- b. Molly has 23 stuffed toys that she likes, and 16 that she does not like.
How many stuffed toys does Molly have?

<hr/>	

- c. Molly gave the 16 toys she does not like to her sister Annie.
Now, Annie has 33 toys.
How many toys did Annie have before?

<hr/>	

- d. Jessica had 465 points in a computer game. She played and got 145 more points. Then she also got a 90-point bonus!
How many points does Jessica have now?

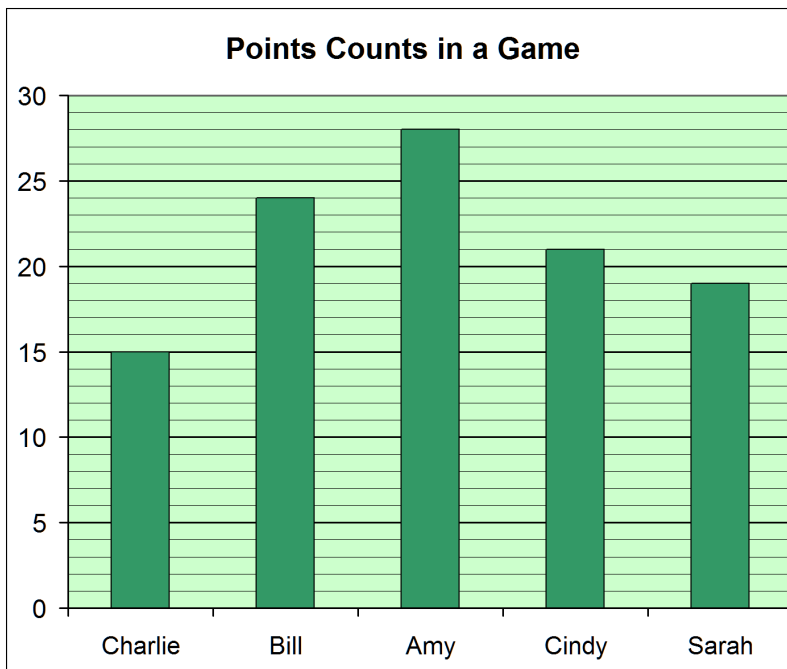
<hr/>		

- e. Olivia did 26 jumping jacks, which was 14 fewer jumping jacks than what her brother Aaron did.
How many jumping jacks did Aaron do?

<hr/>	

<hr/>	

9. a. Fill in the table with how many points the children got in the game.



CHILD	POINTS
Charlie	15
Bill	
Amy	
Cindy	
Sarah	

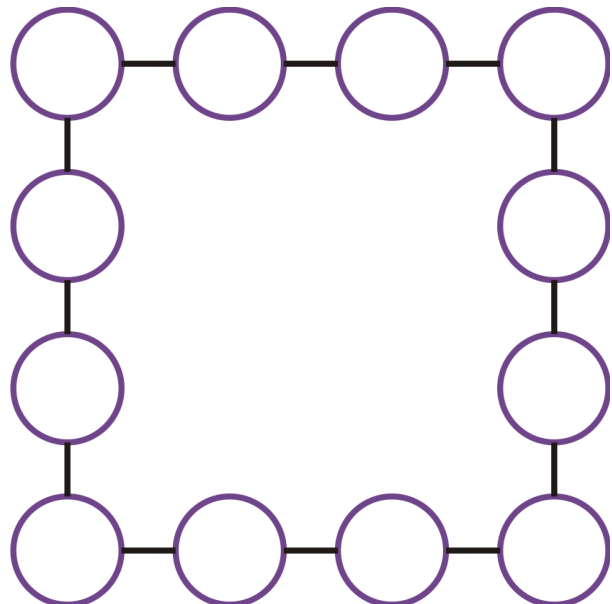
b. How many fewer points did Bill get than Amy?

c. How many more points did Cindy get than Charlie?

Can you place numbers from 1 through 12 into the circles so that the sum of each connecting line is 26?

Hint: The numbers that go in the top corners are 7 and 6, and the numbers that go in the bottom corners are 5 and 8.

Puzzle Corner



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Change

When you buy something in a store, you often do not have the exact amount of money to pay for it. Instead, you give the clerk *more* money than what the item costs. The clerk then gives you some money back. This is called your *change*.

A pen costs 40¢. You don't have the coins to make exactly 40¢, so you give the clerk 50¢. That is 10¢ too much! But then the clerk gives you back 10¢ — your change.



You give: Your change:



50¢



10¢

The clerk gives you back the *difference* between the price and what you paid.

In each problem below, find the change you get back. Think of the DIFFERENCE between the price and what you pay. Or, think how many cents you paid “too much.” That will be your change.

You can set up a “play store” to do these problems, using real money, one person as a clerk, and one person as a customer.

1. Write how many cents you give, and how many cents is your change.

<p>a.</p> <p>Price: 20¢</p> <p>You give: _____¢ _____¢</p> <p>Your change:</p>	<p>b.</p> <p>Price: 30¢</p> <p>You give: _____¢ _____¢</p> <p>Your change:</p>
<p>c.</p> <p>Price: 35¢</p> <p>You give: _____¢ _____¢</p> <p>Your change:</p>	<p>d.</p> <p>Price: 17¢</p> <p>You give: _____¢ _____¢</p> <p>Your change:</p>

<p>e. You give: Your change:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>Price: 22¢ _____ ¢ _____ ¢</p>	<p>f. You give: Your change:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>Price: 11¢ _____ ¢ _____ ¢</p>
<p>g. You give: Your change:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>Price: 60¢ _____ ¢ _____ ¢</p>	<p>h. You give: Your change:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> </div> <p>Price: 80¢ _____ ¢ _____ ¢</p>


2. Circle the coins you use to pay. Write how many cents your change is.

<p>a. You buy a drink for 55¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>
<p>b. You buy raisins for 33¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>
<p>c. You buy a toy for 46¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>
<p>d. You buy a book for 88¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>
<p>e. You buy a basket for 75¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>
<p>f. You buy crayons for 63¢.</p>	<p>You have:</p>	<p>Change: _____ ¢</p>

3. Practice some more! Figure out the change.

<p>a. Paper costs 70¢. You give \$1.</p> <p>Change: _____ ¢</p>	<p>b. A banana costs 41¢. You give 50¢.</p> <p>Change: _____ ¢</p>	<p>c. A book costs 94¢. You give \$1.</p> <p>Change: _____ ¢</p>
<p>d. A toy costs 20¢. You give 50¢.</p> <p>Change: _____ ¢</p>	<p>e. A drink costs 70¢. You give \$1.</p> <p>Change: _____ ¢</p>	<p>f. A towel costs 62¢. You give 75¢.</p> <p>Change: _____ ¢</p>

4. Now you buy many items. First add their prices to find the total. Then find the change. Draw the coins that could be your change.

<p>a. A magazine costs 20¢. You buy three of them. You give \$1.</p> <p><u>Total cost: 60¢</u></p> <p><u>Change: 40¢</u></p> <div style="text-align: center;">  </div>
<p>b. A toy costs 15¢ and another toy 20¢. You give 50¢.</p> <p>Total cost: _____ ¢</p> <p>Change: _____ ¢</p>
<p>c. A lollipop costs 8¢. You buy two of them. You give 20¢.</p> <p>Total cost: _____ ¢</p> <p>Change: _____ ¢</p>
<p>d. A pencil costs 5¢. You buy four of them. You give 25¢.</p> <p>Total cost: _____ ¢</p> <p>Change: _____ ¢</p>
<p>e. An eraser costs 35¢ and a pencil 10¢. You give 50¢.</p> <p>Total cost: _____ ¢</p> <p>Change: _____ ¢</p>

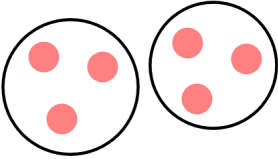
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Many Times the Same Group

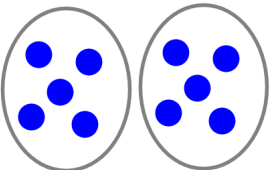
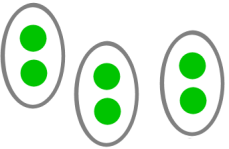
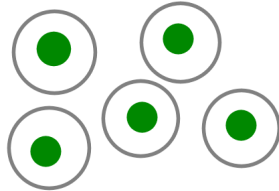
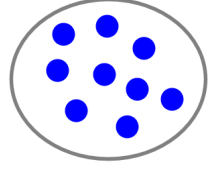
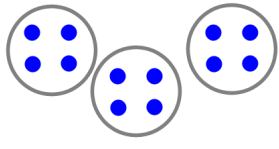

1. Write.

a. 2 times the word “CAT”	b. 3 times the word “ME”	c. 5 times the word “YOU”
d. 0 times the word “FROG”	e. 4 times the word “SCHOOL”	f. 1 time the word “HERE”

2. Draw groups of balls.

		
a. 2 times a group of 3 balls	b. 3 times a group of 5 balls	c. 1 time a group of 7 balls
d. 4 times a group of 1 ball	e. 0 times a group of 2 balls	f. 3 times a group of 3 balls
g. 0 times a group of 8 balls	h. 4 times a group of 0 balls	i. 5 times a group of 2 balls

3. Fill in the missing parts.

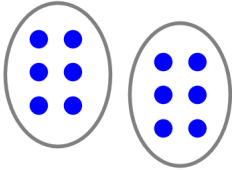
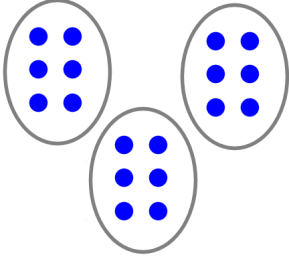
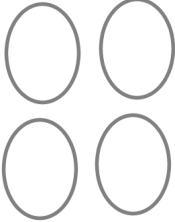


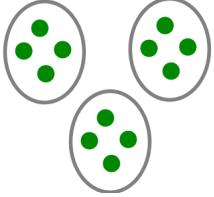
 <p>a. <u>2</u> times <u>5</u></p>	 <p>b. _____ times _____</p>	 <p>c. _____ times _____</p>
 <p>d. _____ times _____</p>	 <p>e. _____ times _____</p>	 <p>f. _____ times _____</p>

5×3 <p>This means “5 times a group of 3.” It is called multiplication.</p>	2×7 <p>This means “2 times a group of 7.” You <i>multiply</i> 2 times 7.</p>
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4. Now it is your turn to draw! Notice also the symbol \times which is read “times.”

<p>a. 2 times 4 2×4</p>	<p>b. 3 times 6 3×6</p>	<p>c. 1 times 7 1×7</p>
<p>d. 6 times 1 6×1</p>	<p>e. 4 times 0 4×0</p>	<p>f. 2 times 2 2×2</p>

5. Write the multiplication sentence. Write the total after the “=” sign.

<p>a.</p>  <p>$2 \times 6 = 12$</p>	<p>b.</p>  <p>_____ \times _____ = _____</p>	<p>c.</p>  <p>_____ \times _____ = _____</p>
<p>d.</p>  <p>_____ \times _____ = _____</p>	<p>e.</p>  <p>_____ \times _____ = _____</p>	<p>f.</p>  <p>_____ \times _____ = _____</p>

6. Draw the groups. Write the total.

<p>a. $8 \times 1 =$ _____</p>	<p>b. $1 \times 10 =$ _____</p>	<p>c. $2 \times 2 =$ _____</p>
<p>d. $5 \times 2 =$ _____</p>	<p>e. $2 \times 8 =$ _____</p>	<p>f. $3 \times 3 =$ _____</p>