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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.

The portion of first grade included in this book, Part B, covers strategies for addition and subtraction facts (chapter 4), telling time and the calendar (chapter 5), shapes and measuring (chapter 6), adding and subtracting two-digit numbers and reading pictographs (chapter 7), and counting coins (chapter 8). The book 1-A covers addition concept, subtraction concept, and place value with two-digit numbers.

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/>

There are free videos matched to the curriculum at <https://www.mathmammoth.com/videos/>

I wish you success in teaching math!

Maria Miller, the author

Chapter 4: Addition and Subtraction Facts

Introduction

This chapter provides lots of practice for learning and memorizing the basic addition and subtraction facts with numbers from 0 to 10. The Common Core Standards require children in the first grade to demonstrate fluency in addition and subtraction with numbers up to 10, and we aim for that goal here.

Since this chapter is repetitive, consider studying it simultaneously with some other section of the curriculum, such as telling time, shapes, measuring, or counting coins. For example, the child could study telling time and this chapter each day, or study the two different chapters on alternate days. This is not compulsory but just a suggestion to “mix things up” in a somewhat spiral fashion.

The series of lessons titled *Addition and Subtraction Facts with...* aims to help the student to memorize the basic addition and subtraction facts within 0-10. We approach it from the concept of “fact families,” which makes the process logical and structured. These lessons have a lot of repetition and practice for both subtraction and addition facts.

Many children may not need all the practice problems provided, so don’t assign all of them by default. Use your judgment, and only assign a certain portion, such as half of them, at first. The rest of them can then be used later as a review. If assigning only half of the exercises is not enough, adjust as necessary.

Alongside this book, you can also use math games or flashcards to reinforce these facts. You will find a list of some games below.

While the child does not absolutely have to learn these facts by heart while studying this chapter, it is advisable to learn them fairly well. Mathematics builds upon previously learned concepts and facts, and learning addition and subtraction facts is essential for later study, such as when students add $24 + 5$ (in chapter 7 of this curriculum). However, if the child has not memorized these facts before the end of the chapter, don’t worry. Go on with the curriculum, but keep practicing the facts with games, worksheets, drills, *etc.*

Besides practicing the facts with the help of fact families, the child will also solve word problems, fill in number patterns, use a symbol to represent an unknown number, compare expressions (such as $5 - 2 < 2 + 5$), and subtract more than one number at a time.

As a friendly reminder, there are videos matched to the curriculum at <https://www.mathmammoth.com/videos>. Choose Grade 1.

Pacing Suggestion for Chapter 4

The Lessons in Chapter 4	page	span	suggested pacing	your pacing
Addition and Subtraction Facts with 4 and 5	10	2 pages	2 days	
Addition and Subtraction Facts with 6	12	3 pages	2 days	
Addition and Subtraction Facts with 7	15	2 pages	2 days	
Addition and Subtraction Facts with 8	17	4 pages	3 days	
Addition and Subtraction Facts with 9	21	3 pages	2 days	
Addition and Subtraction Facts with 10	24	4 pages	3 days	
Subtracting More Than One Number	28	2 pages	1 day	
Review - Facts with 6, 7, and 8	30	2 pages	1 day	
Review - Facts with 9 and 10	32	3 pages	2 days	
Chapter 4 Test (optional)				
TOTALS		25 pages	18 days	

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/>.

Games and Activities

Addition (or Subtraction) Challenge

You need: A standard deck of playing cards from which you remove the face cards. For the addition version, you might also remove some of the other higher cards, such as tens, nines, and eights.

Game Play: In each round, each player is dealt two cards face up, and has to calculate their sum or difference (add/subtract). The player with the highest sum or difference 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, then those players get an additional two cards and use those to resolve the tie.

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. Playing this game several times will help the child to memorize the number bonds associated with a particular target number.

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.

Games and Activities at Math Mammoth Practice Zone

Fact Families

Choose which fact family or families to practice, and the program will give you addition and subtraction problems from those, including with missing numbers.

<https://www.mathmammoth.com/practice/fact-families>

Subtraction Hidden Picture Game

Choose a number range (such as 1 to 10) and uncover a hidden picture while solving subtraction problems!

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

Number Bonds

Practice number bonds, either with pictures or with numbers.

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

“7 Up” Card Game

You will see seven cards dealt face up. Simply choose any two cards that make 10 (or your chosen sum) to discard. When there are no cards that make that sum, click the deck to deal more cards. For this chapter, choose sums of 7, 8, 9, or 10.

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

Fruity Math

Add two single-digit numbers (such as $4 + 5$). Click the fruit with the correct answer and try to get as many points as you can within two minutes.

https://www.mathmammoth.com/practice/fruity-math#op=addition&duration=120&mode=manual&config=2,5x1__1,7x1&max-sum=120

Bingo

Choose Subtraction (Under 10).

<https://www.mathmammoth.com/practice/bingo>

Make Subtraction Sentences

You are given numbers (in flowers), and an answer to a subtraction. Drag two flowers to the empty slots so that the subtraction is true.

<https://www.mathmammoth.com/practice/number-sentences#questions=5&types=sub-1-12>

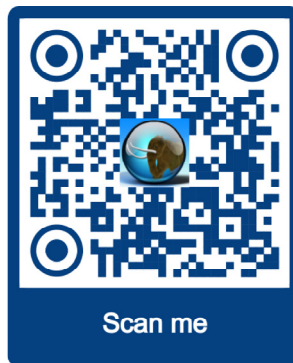
Further Resources on the Internet

We have compiled a list of Internet resources that match the topics in this chapter, including pages that offer:

- **online practice** for concepts;
- online **games**, or occasionally, printable games;
- **animations** and interactive **illustrations** of math concepts;
- **articles** that teach a math concept.

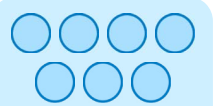
We heartily recommend you take a look! Many of our customers love using these resources to supplement the bookwork. You can use these resources as you see fit for extra practice, to illustrate a concept better and even just for some fun. Enjoy!

<https://l.mathmammoth.com/gr1ch4>

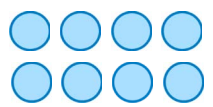
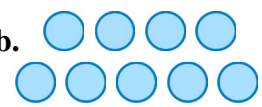
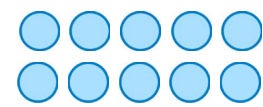


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Subtracting More Than One Number

 <p>$7 - 1 - 2 = ?$</p>	<p>You have 7 circles. First you take away 1 circle, and then you take away 2 more circles.</p> <p>You will have 4 circles left.</p>
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1. Subtract twice, taking away circles. You can cover the circles to help.

<p>a. </p> <p>$8 - 2 - 3 = \underline{\quad}$</p> <p>$8 - 5 - 2 = \underline{\quad}$</p> <p>$8 - 1 - 3 = \underline{\quad}$</p>	<p>b. </p> <p>$9 - 3 - 1 = \underline{\quad}$</p> <p>$9 - 4 - 2 = \underline{\quad}$</p> <p>$9 - 2 - 5 = \underline{\quad}$</p>	<p>c. </p> <p>$10 - 5 - 3 = \underline{\quad}$</p> <p>$10 - 6 - 2 = \underline{\quad}$</p> <p>$10 - 1 - 4 = \underline{\quad}$</p>
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2. Solve. You can draw pictures to help.

<p>a. Mary had ten cookies. She gave two to her brother and two to her sister. How many does she have left?</p>
<p>b. Seven birds were in the tree. Three flew away. After a while, one more flew away. How many birds were left in the tree?</p>
<p>c. Eight cars were in the parking lot. Then three cars left. After that two more cars left. How many cars are there now?</p>
<p>d. Jack had \$5. His mom gave him \$1, and his dad gave him \$2. How many dollars does Jack have now?</p>

Review — Facts with 6, 7, and 8

1. Practice addition and subtraction facts with 6, 7, and 8.

<p>a.</p> $0 + \underline{\quad} = 8$ $3 + \underline{\quad} = 8$ $2 + \underline{\quad} = 8$ $6 + \underline{\quad} = 8$ $5 + \underline{\quad} = 8$	<p>b.</p> $3 + \underline{\quad} = 7$ $5 + \underline{\quad} = 7$ $1 + \underline{\quad} = 7$ $6 + \underline{\quad} = 7$ $2 + \underline{\quad} = 7$	<p>c.</p> $6 - \underline{\quad} = 2$ $6 - \underline{\quad} = 5$ $6 - \underline{\quad} = 3$ $6 - \underline{\quad} = 4$ $6 - \underline{\quad} = 1$	<p>d.</p> $7 - \underline{\quad} = 2$ $8 - \underline{\quad} = 3$ $6 - \underline{\quad} = 1$ $8 - \underline{\quad} = 4$ $7 - \underline{\quad} = 4$
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2. First add and subtract. Write the answers in the boxes below. Then compare, and write $<$, $>$ or $=$.

<p>a. $8 - 2$? $7 - 3$</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: center;"> <input style="background-color: #c8e6c9;" type="text"/> <input type="text"/> <input style="background-color: #c8e6c9;" type="text"/> </p>	<p>b. $10 - 7$? $9 - 6$</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: center;"> <input style="background-color: #c8e6c9;" type="text"/> <input type="text"/> <input style="background-color: #c8e6c9;" type="text"/> </p>	<p>c. $7 - 6$? $4 - 2$</p> <p style="text-align: center;">↓ ↓</p> <p style="text-align: center;"> <input style="background-color: #c8e6c9;" type="text"/> <input type="text"/> <input style="background-color: #c8e6c9;" type="text"/> </p>
<p>d. $4 + 2$ <input type="text"/> $9 - 8$</p>	<p>e. $10 - 4$ <input type="text"/> $7 - 4$</p>	<p>f. $3 + 4$ <input type="text"/> $7 - 1$</p>

3. Solve.

a. Luisa and Caleb were playing a game. Luisa had 9 game pieces and Caleb had 4. How many more game pieces did Luisa have than Caleb?

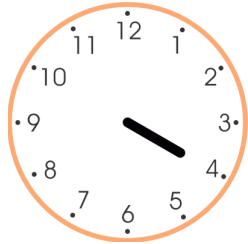
b. Luisa gave one game piece to Caleb. Now who has more game pieces?

How many more?

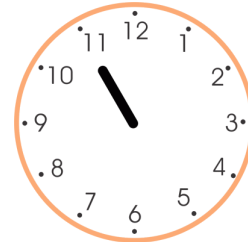
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Whole and Half Hours

In this lesson, the clock only has one hand – the HOUR hand.



The hour hand points to four – it is four hours, or “four o’clock.”

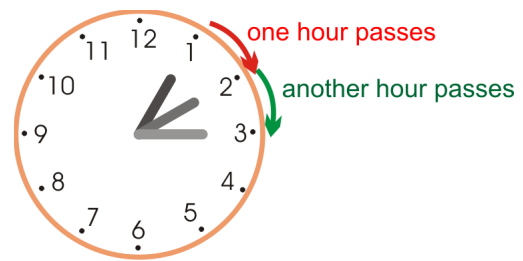


The hour hand points to eleven – it is eleven hours, or “eleven o’clock”.

The hour hand moves slowly around the clock face: from 1 to 2 to 3, and so on.

When the hour hand moves from 1 to 2, exactly one hour of time has passed.

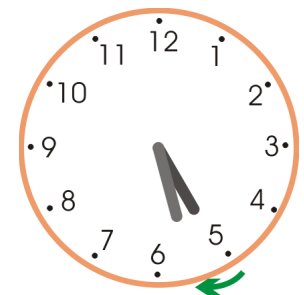
The same is true when the hour hand moves from 2 to 3. It takes the hour-hand one hour to do that.



On this clock, the hour hand pointed to 5 when it was five o’clock.

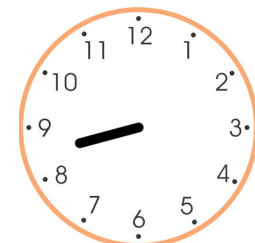
Then it moved to **halfway** between 5 and 6. We say it is **half past five**.

It takes the hour hand one-half hour to move from five to halfway between five and six.



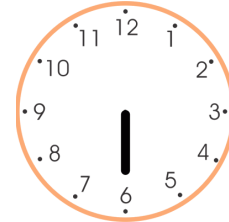
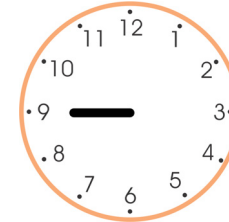


Here the hour hand has moved past eight o’clock, and is halfway between 8 and 9. We say it is half past eight.

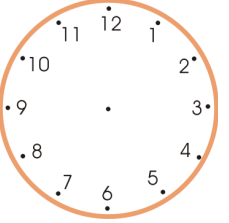
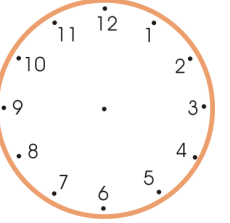
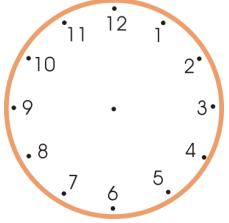
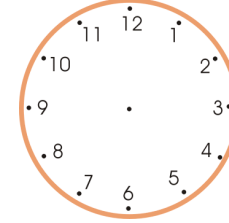
In half an hour, it will be nine o’clock.



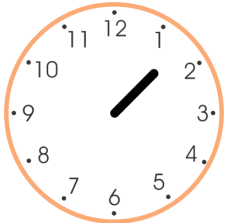
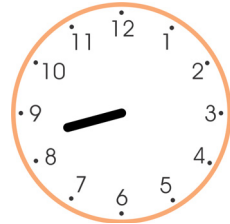
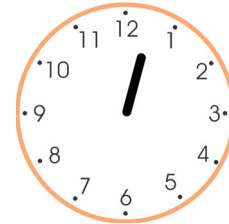
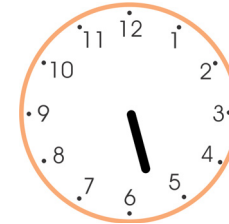
1. Write the time under each clock face.

			
a. _____ o'clock	b. _____ o'clock	c. _____ o'clock	d. _____ o'clock

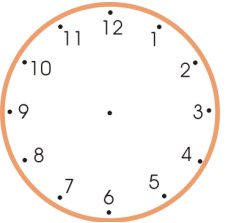
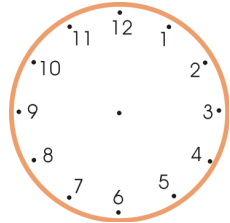
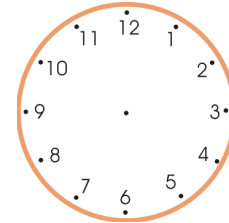
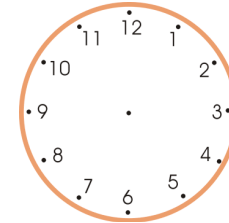
2. Draw the hour hand.

			
a. Five o'clock	b. Eight o'clock	c. Twelve o'clock	d. Seven o'clock



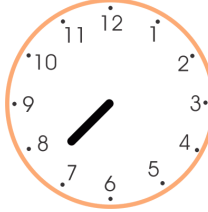
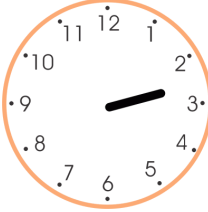
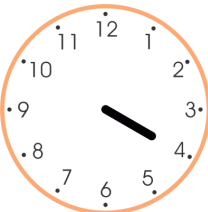


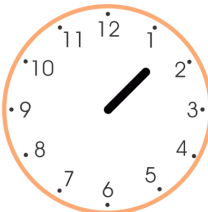
3. Write the time.

			
a. Half past _____	b. Half past _____	c. Half past _____	d. Half past _____

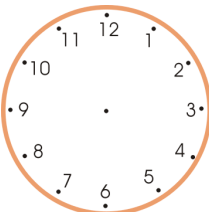
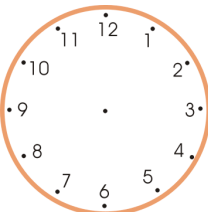
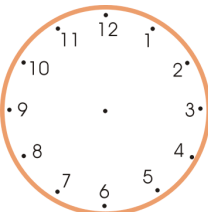
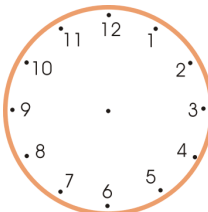
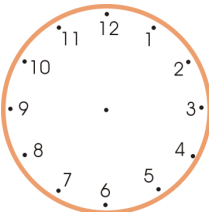
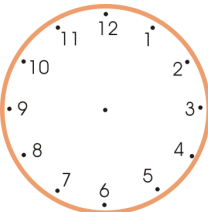
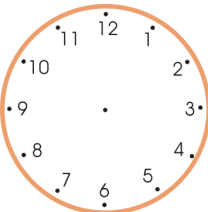
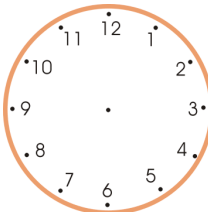
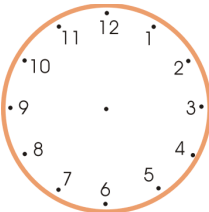
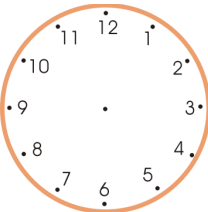
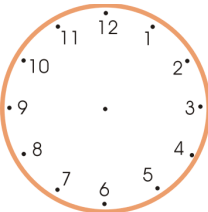
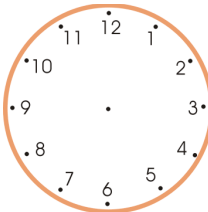
4. Draw the hour hand.

			
a. Half past six	b. Half past three	c. Half past two	d. Half past four

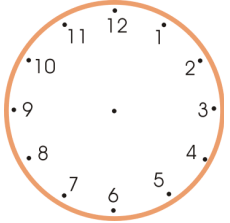
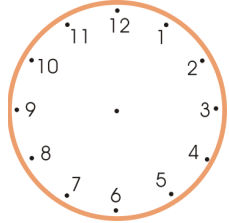
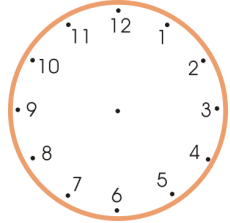
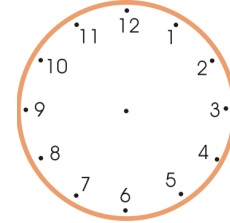
5. Write the time!

 <p>a. _____</p> <p>_____</p>	 <p>b. _____</p> <p>_____</p>	 <p>c. _____</p> <p>_____</p>	 <p>d. _____</p> <p>_____</p>
 <p>e. _____</p> <p>_____</p>	 <p>f. _____</p> <p>_____</p>	 <p>g. _____</p> <p>_____</p>	 <p>h. _____</p> <p>_____</p>



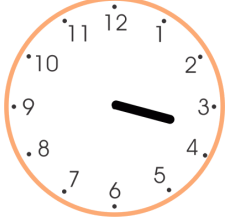
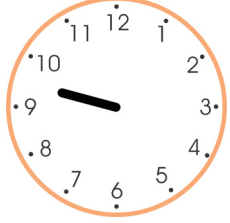
6. Draw an hour hand on each clock. In the second row, show the time a half-hour later. In the third row, show the time another half-hour later than the clock in the second row.

<p>Draw the hour hand.</p>	 <p>a. Five o'clock</p>	 <p>b. One o'clock</p>	 <p>c. Half past six</p>	 <p>d. Half past three</p>
<p>A half-hour later →</p>				
<p>Another half-hour later →</p>				

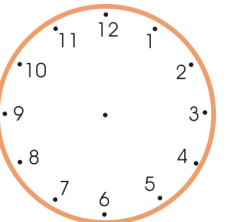
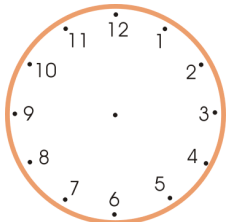
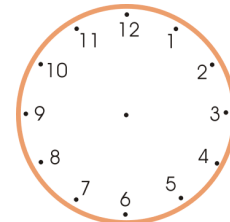
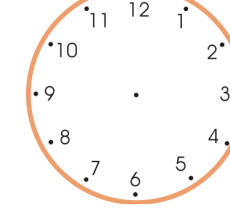
7. Draw the hour hand on each clock. Write the time that the clock will show a half-hour later.

				
	a. Three o'clock	b. Eleven o'clock	c. Half past five	d. Half past eleven
1/2 hour later →	half past _____	half past _____	_____ o'clock	_____ o'clock

8. Write the time that the clock shows. Then write what the time will be an hour later.

				
	a. _____ o'clock	b. _____ o'clock	c. half past _____	d. half past _____
An hour later →	_____	_____	_____	_____

9. Draw the hour hand on the clock face. Write what it will be an hour later.

				
	a. Three o'clock	b. Eleven o'clock	c. Half-past five	d. Half past eleven
An hour later →	_____	_____	_____	_____

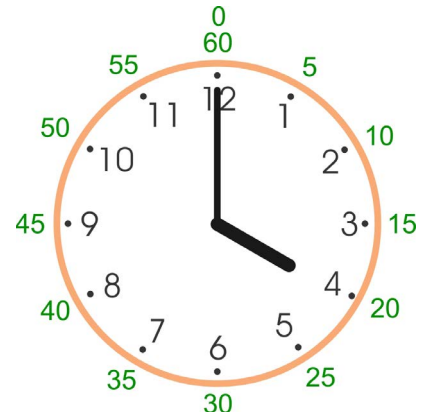
Minutes and Half Hours

The minute hand on the clock is the thinner and longer hand.

It shows us the minutes - but the numbers 1-12 on the clock face do NOT tell us the minutes.

The green numbers are for the minute hand. They are not normally written on the clock face at all.

The time on the clock is 4 o'clock, or 4:00, which is four hours and zero minutes.



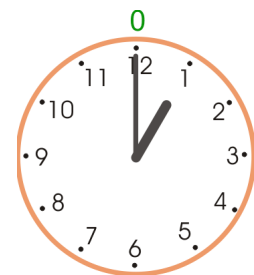
Find a clock that has a knob you can turn to move the hour and minute hands. Set the hour hand pointing to one, and the minute hand pointing straight “up”.

Move the hour hand from 1 to 2, and observe the minute hand!

Now move the hour hand from 2 to 3.
What does the minute hand do?

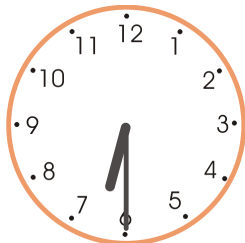
If you make the hour hand travel from 7 to 10,
how many “rounds” does the minute-hand make? _____

Make the minute hand travel backwards as well.

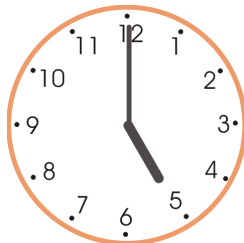


It is 1 o'clock
(and 0 minutes)

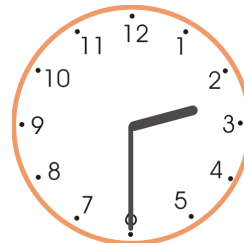
1. You know these from the previous lesson. Now the minute hand is added.
Write the time using the expressions *o'clock* or *half past*.



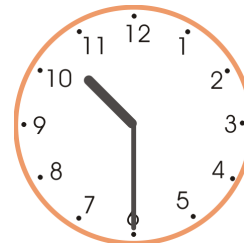
a. _____



b. _____



c. _____



d. _____

1 HOUR = 60 MINUTES!

Use your clock. How much time passes when the hour hand travels from 1 to 2? _____ hour

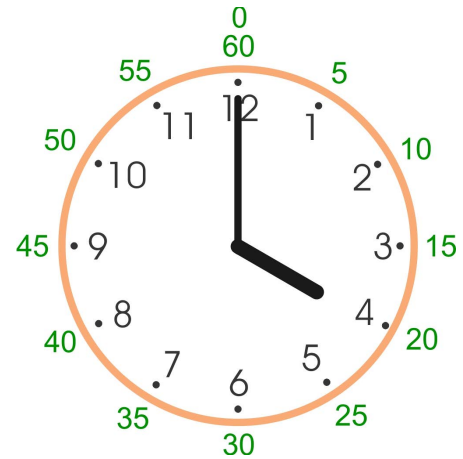
At the same time, the minute hand travels from 0 to 60 minutes, or once around the clock.

Now let the hour hand travel from 2 to half-past 2 (only half an hour). The minute hand traveled from 0 minutes to 30 minutes.

We write the time as 2:30.
That means 2 hours and 30 minutes.

Then let the hour hand travel from half-past 2 to 3 — another half an hour.

The minute hand traveled from 30 minutes to _____ (or 0) minutes.

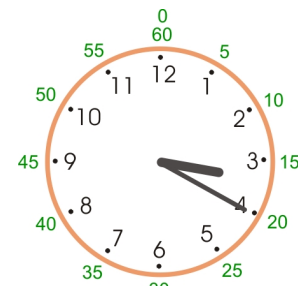


It is 4:00.

The green numbers are for the minutes. Just count by fives to learn them!

1 hour = 60 minutes.

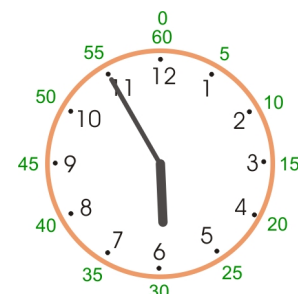
The hour hand is past 3, and the minute hand points to 20.
The time is 3:20, which is 3 hours and 20 minutes.



The hour hand *looks like* pointing to eight, but it's not quite eight o'clock. The hour hand is past seven and not yet on eight, and that is why we say the time is "seven forty," or 7:40, which is 7 hours and 40 minutes.

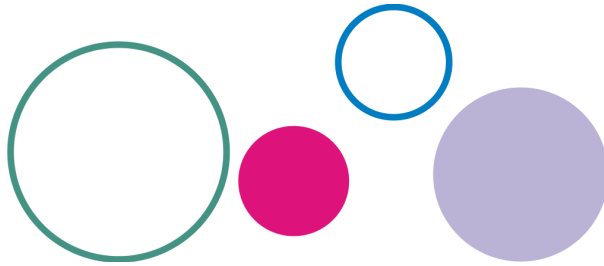


Again, the hour hand looks like it's pointing to six, but it's not yet six o'clock (though it is almost six). The hour hand has passed five, so we say it is "five fifty-five," or 5:55, which is 5 hours and 55 minutes.

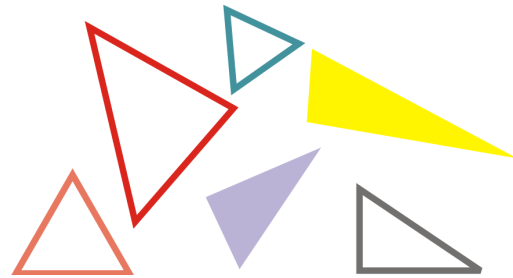


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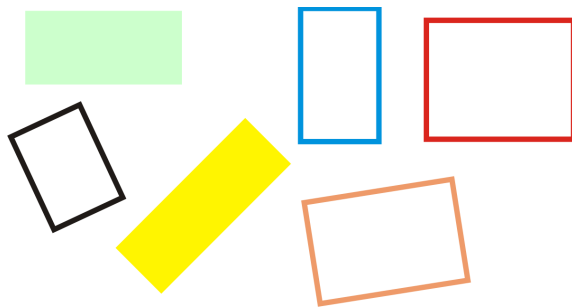
Basic Shapes



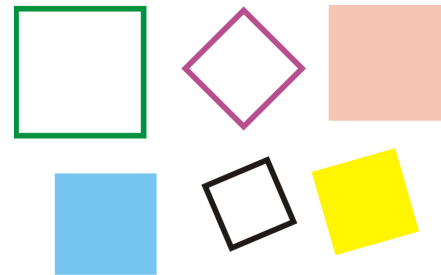
These are **circles**. They don't have any corners. They are perfectly round!



These are **triangles**. They have **THREE** corners and three sides.

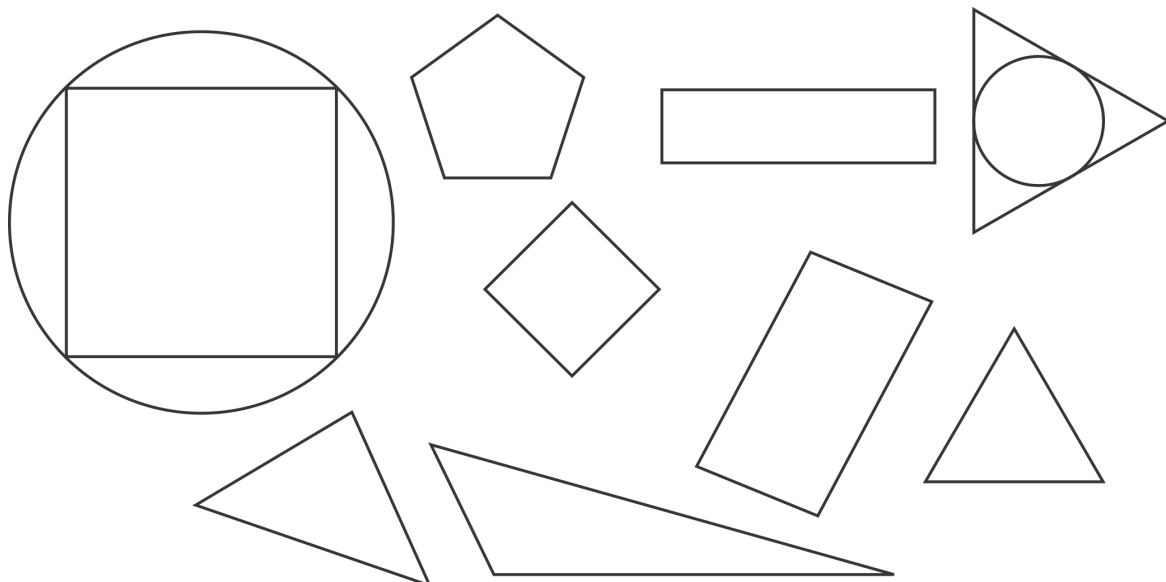


These are **rectangles**. They have four "square" corners. They look like books!



These are **squares**. Not only do squares have four square corners, but they also have four sides that are the same length.

1. Color the **circles yellow**; the **squares red**; the **triangles green** and the **rectangles blue**. One shape will not be colored.



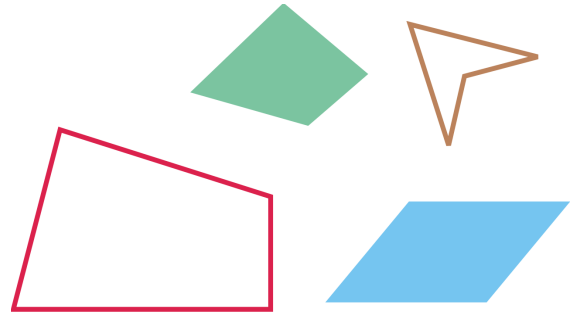
So what are these shapes?

They have four corners and four sides.
But they don't have four square corners,
like squares and rectangles do.

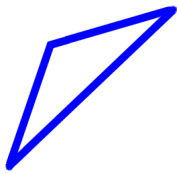
They are just **four-sided shapes** that are
not squares nor rectangles. In mathematics
we call them **quadrilaterals**.

“Quadri-” comes from *quattuor*, Latin for “four.”

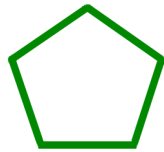
“Lateral” comes from *lateralis*, Latin for “side.”



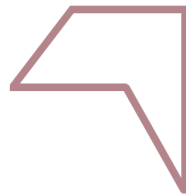
2. Write down how many corners each shape has.



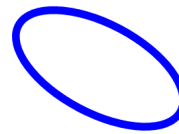
a. _____



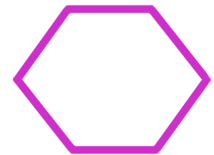
b. _____



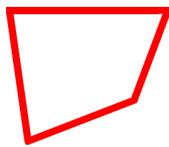
c. _____



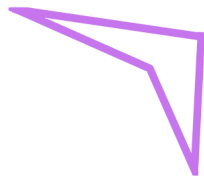
d. _____



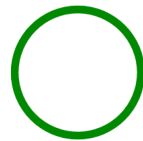
e. _____



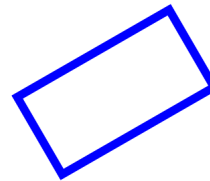
f. _____



g. _____



h. _____



i. _____



j. _____

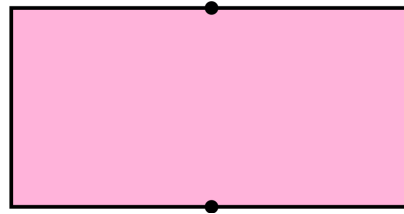
3. a. In the shapes above, there is one rectangle. Mark it with **R**.
b. Mark the other four-sided shapes with **Q** (for quadrilateral).
c. Mark the one circle with **C**.
d. Find another rounded shape that is not a circle, and mark it with **E**.

4. a. Draw three dots anywhere in this space. Join them with lines.
What shape do you get?

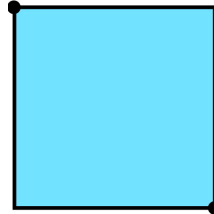
b. Once again draw three dots anywhere in this space, and join them with lines.

5. Draw a line from dot to dot so that you divide the shape into two new shapes. Use a ruler. How many sides do the new shapes have? How many corners?

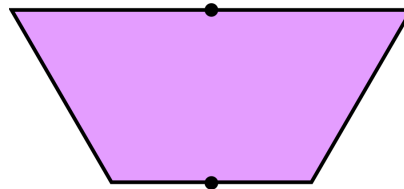
- a. The new shapes have _____ sides,
and _____ corners.
They are _____



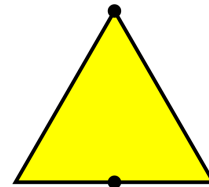
- b. The new shapes have _____ sides,
and _____ corners.
They are _____



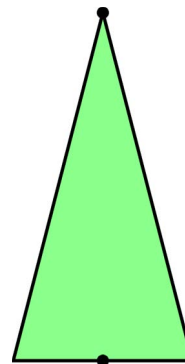
- c. The new shapes have _____ sides,
and _____ corners.
They are quadrilaterals



- d. The new shapes have _____ sides,
and _____ corners.
They are _____

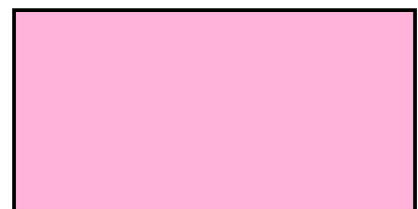


- e. The new shapes have _____ sides,
and _____ corners.
They are _____



Puzzle Corner

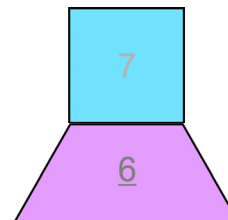
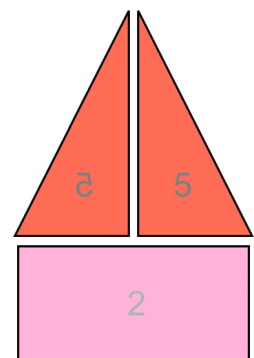
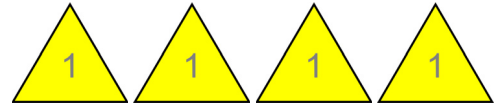
Divide this shape, using one line, into a triangle and a pentagon (five-sided shape).

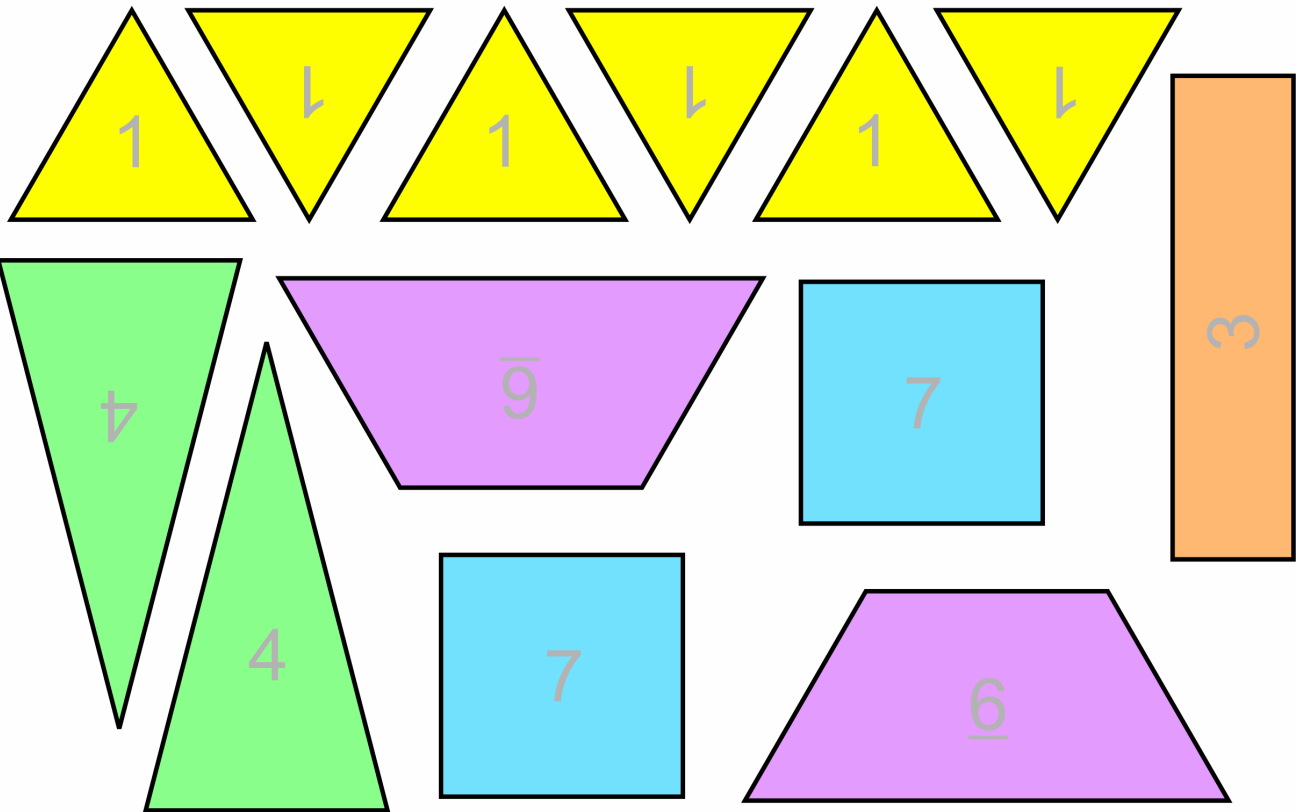
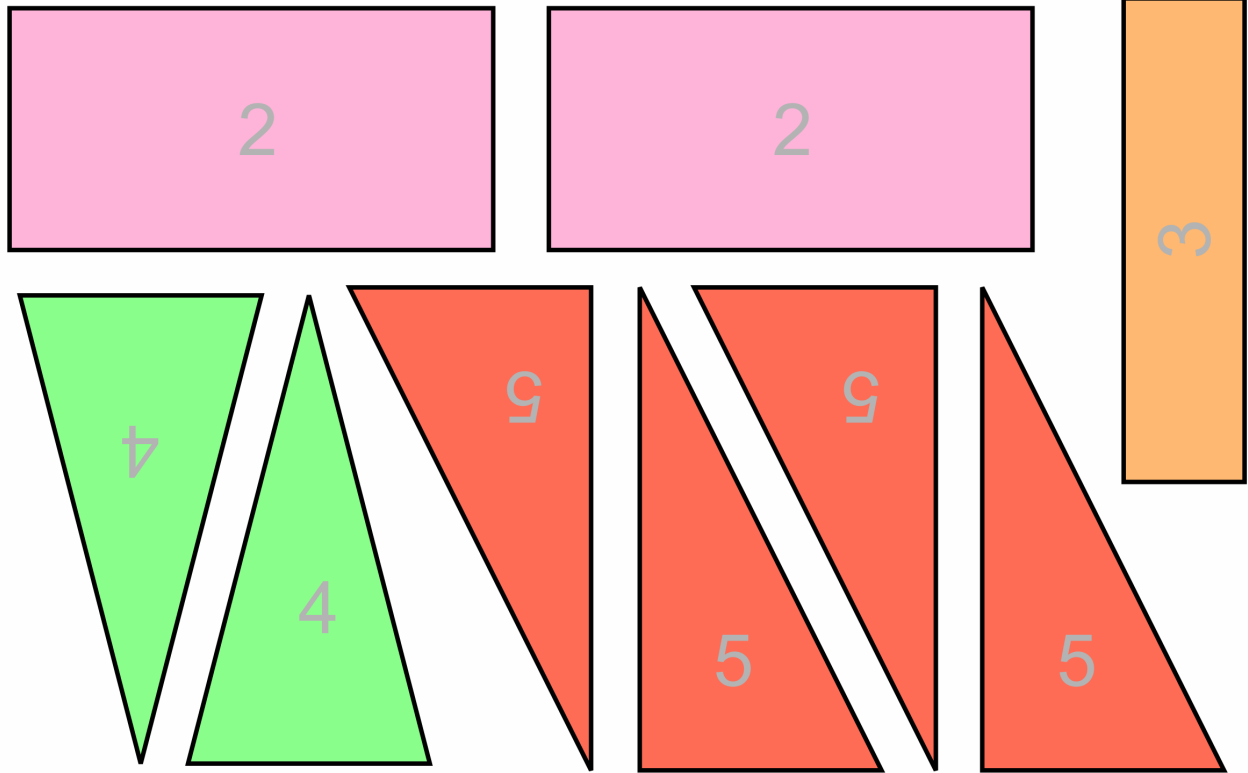


Playing with Shapes

Cut out the shapes. Hint: if you have the download version of this curriculum, print the page of cut-out shapes in landscape orientation, scaled at 140-150%, so it prints on two sheets of paper. All the shapes will then be much bigger.

1. Make a big triangle with the four yellow triangles (marked with 1).
2. Take all six of the yellow triangles (marked with 1). Put them together to get a six-sided shape (a *hexagon*).
3. Use the two pink rectangles (marked with 2) to make a square.
4. Use one pink rectangle (#2) and two blue squares (#7) to make a square.
5. Can you make a bigger square than the one you made in exercise 4? Use any pieces you choose.
6. Make a rectangle using two red triangles (#5).
7. Make a bigger rectangle using four red triangles (#5).
8. Put together two of the green triangles (#4) to get a four-sided shape. You can do this in several different ways!
9. Put together the two slim rectangles (#3) to make **a.** a rectangle; **b.** an L-shape; **c.** an eight-sided shape.
10. Put together the two purple shapes (#6) to make a six-sided shape (a hexagon). You can do this in several different ways!
11. Put together the two purple shapes (#6) to make a four-sided shape (a *quadrilateral*).
12. A challenge: put together the two purple shapes (#6) to make a five-sided shape (a *pentagon*).
13. Make your own pentagons (five-sided figures) using any of the shapes! Make several different ones.
14. Make your own hexagons (six-sided figures) using any of the shapes! Make several different ones.
15. Make interesting figures of your own using any of the shapes. Have fun!





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Refresh Your Memory



1. Divide (break up) the numbers into two parts.

7	8	9	10
5 and _____	1 and _____	4 and _____	3 and _____
6 and _____	4 and _____	8 and _____	9 and _____
1 and _____	5 and _____	2 and _____	6 and _____
2 and _____	7 and _____	1 and _____	5 and _____
4 and _____	2 and _____	3 and _____	2 and _____

2. Subtract. You can use the number pairs above.

a.	b.	c.	d.
$7 - 1 =$ _____	$8 - 3 =$ _____	$9 - 2 =$ _____	$10 - 3 =$ _____
$7 - 5 =$ _____	$8 - 6 =$ _____	$9 - 3 =$ _____	$10 - 8 =$ _____
$7 - 3 =$ _____	$8 - 2 =$ _____	$9 - 5 =$ _____	$10 - 5 =$ _____
$7 - 6 =$ _____	$8 - 7 =$ _____	$9 - 7 =$ _____	$10 - 6 =$ _____

3. Write a fact family for each picture.

<p>a. 9</p>  <p>_____ + _____ = _____</p> <p>_____ + _____ = _____</p> <p>_____ - _____ = _____</p> <p>_____ - _____ = _____</p>	<p>b. 7</p>  <p>_____ + _____ = _____</p> <p>_____ + _____ = _____</p> <p>_____ - _____ = _____</p> <p>_____ - _____ = _____</p>
--	---

4. Add or subtract.

a. $7 + 1 + 2 = \underline{\quad}$	b. $3 + 5 + 1 = \underline{\quad}$	c. $10 - 2 - 2 = \underline{\quad}$
$4 + 1 + 4 = \underline{\quad}$	$2 + 2 + 4 = \underline{\quad}$	$7 - 1 - 5 = \underline{\quad}$
$3 + 1 + 2 = \underline{\quad}$	$6 - 1 - 2 = \underline{\quad}$	$9 - 3 - 4 = \underline{\quad}$

5. Add and subtract. Start with the number in the bottom left corner and follow the arrows.

a. 2	
b. 7	

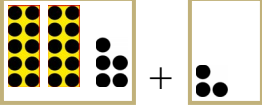
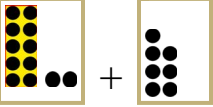
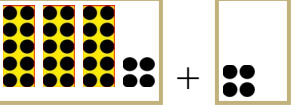
6. Count by tens. If you have forgotten how to do it, a 100-chart can help.

a. 10, 20, _____, _____, _____, _____, _____, _____
b. 24, 34, _____, _____, _____, _____, _____, _____
c. _____, _____, _____, 48, 58, _____, _____, _____, _____

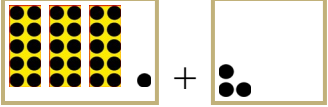
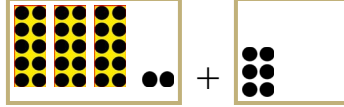
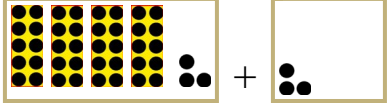
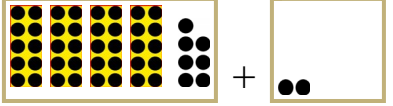
7. Add or subtract.

a.	b.	c.	d.
$20 + 6 = \underline{\quad}$	$20 + \underline{\quad} = 24$	$10 + 10 = \underline{\quad}$	$50 - 10 = \underline{\quad}$
$40 + 8 = \underline{\quad}$	$70 + \underline{\quad} = 78$	$32 + 10 = \underline{\quad}$	$66 - 10 = \underline{\quad}$
$50 + 2 = \underline{\quad}$	$50 + \underline{\quad} = 56$	$67 + 10 = \underline{\quad}$	$82 - 10 = \underline{\quad}$

Adding Without Regrouping

 $25 + 3 = 28$ Add $5 + 3$ first. The 2 tens do not change.	 $12 + 7 = 19$ Add $2 + 7$ first. The ten does not change.	 $34 + 4 = 38$ Add $4 + 4$ first. The 3 tens do not change.
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1. Write an addition sentence for each picture.

<p>a. </p> <p>_____ + _____ = _____</p>	<p>b. </p> <p>_____ + _____ = _____</p>
<p>c. </p> <p>_____ + _____ = _____</p>	<p>d. </p> <p>_____ + _____ = _____</p>

2. Add. Compare the problems. The top problem helps you solve the bottom one!

<p>a. $5 + 2 = \underline{\quad}$</p> <p>$35 + 2 = \underline{\quad}$</p>	<p>b. $4 + 5 = \underline{\quad}$</p> <p>$64 + 5 = \underline{\quad}$</p>	<p>c. $3 + 6 = \underline{\quad}$</p> <p>$93 + 6 = \underline{\quad}$</p>
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3. Add. Below each problem, write a “helping” problem with numbers less than 10.

<p>a. $52 + 7 = \underline{\quad}$</p> <p><u> </u> $2 + 7 = \underline{\quad}$</p>	<p>b. $33 + 1 = \underline{\quad}$</p> <p>_____ + _____ = _____</p>	<p>c. $11 + 5 = \underline{\quad}$</p> <p>_____ + _____ = _____</p>
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4. The numbers are written in boxes! Add the ones in their own column.
Copy the number of tens to the answer line.

a. $35 + 3$	b. $12 + 6$	c. $57 + 1$	d. $64 + 3$																																
tens ones	tens ones	tens ones	tens ones																																
<table border="1" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">3</td><td style="width: 50%; text-align: center;">5</td></tr><tr><td style="text-align: center;">↓</td><td style="text-align: center;">3</td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="text-align: center;">3</td><td style="text-align: center;">8</td></tr></table>	3	5	↓	3			3	8	<table border="1" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">1</td><td style="width: 50%; text-align: center;">2</td></tr><tr><td style="text-align: center;">↓</td><td style="text-align: center;">6</td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>	1	2	↓	6					<table border="1" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">5</td><td style="width: 50%; text-align: center;">7</td></tr><tr><td style="text-align: center;">↓</td><td style="text-align: center;">1</td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>	5	7	↓	1					<table border="1" style="width: 100%;"><tr><td style="width: 50%; text-align: center;">6</td><td style="width: 50%; text-align: center;">4</td></tr><tr><td style="text-align: center;">↓</td><td style="text-align: center;">3</td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>	6	4	↓	3				
3	5																																		
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5	7																																		
↓	1																																		
6	4																																		
↓	3																																		

5. Now *you* write the numbers in the boxes. Add the ones in their own column.

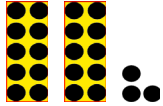
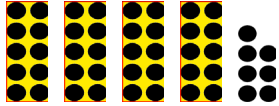
a. $26 + 3$	b. $72 + 4$	c. $65 + 4$	d. $81 + 4$																																
tens ones	tens ones	tens ones	tens ones																																
<table border="1" style="width: 100%;"><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr><tr><td style="text-align: center;">↓</td><td></td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>			↓						<table border="1" style="width: 100%;"><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr><tr><td style="text-align: center;">↓</td><td></td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>			↓						<table border="1" style="width: 100%;"><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr><tr><td style="text-align: center;">↓</td><td></td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>			↓						<table border="1" style="width: 100%;"><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr><tr><td style="text-align: center;">↓</td><td></td></tr><tr><td colspan="2" style="border-top: 1px solid black;"></td></tr><tr><td style="width: 50%;"></td><td style="width: 50%;"></td></tr></table>			↓					
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6. Add. Compare the problems.

a.	b.	c.	d.
$6 + 2 = \underline{\quad}$	$4 + 3 = \underline{\quad}$	$5 + 4 = \underline{\quad}$	$11 + 7 = \underline{\quad}$
$16 + 2 = \underline{\quad}$	$24 + 3 = \underline{\quad}$	$45 + 4 = \underline{\quad}$	$61 + 7 = \underline{\quad}$
$36 + 2 = \underline{\quad}$	$34 + 3 = \underline{\quad}$	$65 + 4 = \underline{\quad}$	$41 + 7 = \underline{\quad}$

7. Add three numbers.

a.	b.	c.
$20 + 5 + 2 = \underline{\quad}$	$93 + 1 + 5 = \underline{\quad}$	$100 + 5 + 4 = \underline{\quad}$
$44 + 2 + 2 = \underline{\quad}$	$83 + 4 + 3 = \underline{\quad}$	$52 + 4 + 2 = \underline{\quad}$

<p>Do you remember how to separate (“break up”) a number into its TENS and ONES?</p>	 $23 = 20 + 3$ <p style="text-align: center;">tens ones</p>	 $47 = 40 + 7$ <p style="text-align: center;">tens ones</p>
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8. Break the numbers into tens and ones or combine the tens and ones into numbers.

<p>a.</p> $18 = 10 + 8$ $25 = \underline{\quad} + \underline{\quad}$ $55 = \underline{\quad} + \underline{\quad}$	<p>b.</p> $32 = \underline{\quad} + \underline{\quad}$ $95 = \underline{\quad} + \underline{\quad}$ $\underline{\quad} = 40 + 9$	<p>c.</p> $\underline{\quad} = 60 + 6$ $\underline{\quad} = 9 + 80$ $\underline{\quad} = 8 + 70$
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9. Compare. Write $<$, $>$, or $=$.

<p>a. $24 + 3$ <input type="text"/> $24 + 5$</p>	<p>c. $17 + 2$ <input type="text"/> $19 + 2$</p>	<p>e. 58 <input type="text"/> $8 + 51$</p>
<p>b. $83 + 5$ <input type="text"/> $85 + 3$</p>	<p>d. $36 + 4$ <input type="text"/> $46 + 4$</p>	<p>f. 66 <input type="text"/> $5 + 61$</p>

Puzzle Corner

★ is a number we don't know—a mystery number! Your task is to *compare* without knowing the mystery number! For example, which is more, ★ + 2 or ★ + 7?

Write $<$ or $>$ in the boxes. Note: there is one comparison you **cannot** do without knowing the mystery number. Can you find it?

$$\star + 5 \quad \boxed{\phantom{<}} \quad \star + 4$$

$$\star - 5 \quad \boxed{\phantom{<}} \quad \star - 4$$

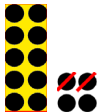
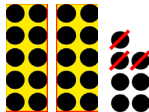
$$\star - 5 \quad \boxed{\phantom{<}} \quad \star$$

$$\star + 2 \quad \boxed{\phantom{<}} \quad \star + 7$$

$$\star - 5 \quad \boxed{\phantom{<}} \quad \star - 6$$

$$\star + \star \quad \boxed{\phantom{<}} \quad \star + 20$$

Subtracting Without Borrowing

 $14 - 2 = \underline{12}$ “I can subtract $4 - 2 = 2$; the 10 stays the same.”	 $27 - 3 = \underline{24}$ “I can subtract $7 - 3 = 4$; the 20 stays the same.”	Think of the <i>ones digits</i> only. The tens do not change because we don't have to subtract from the tens.
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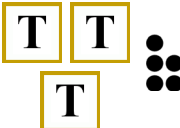
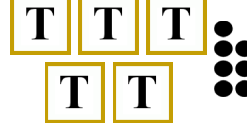
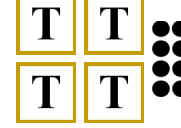
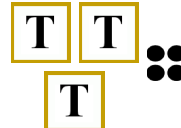
1. Subtract and compare. The top problem helps you solve the bottom one!

a. $8 - 2 = \underline{6}$ $28 - 2 = \underline{26}$	b. $7 - 6 = \underline{\quad}$ $17 - 6 = \underline{\quad}$	c. $7 - 7 = \underline{\quad}$ $67 - 7 = \underline{\quad}$
d. $6 - 6 = \underline{\quad}$ $56 - 6 = \underline{\quad}$	e. $9 - 8 = \underline{\quad}$ $49 - 8 = \underline{\quad}$	f. $5 - 2 = \underline{\quad}$ $95 - 2 = \underline{\quad}$

2. Subtract. Write a “helping problem” below that uses only numbers less than 10.

a. $54 - 2 = \underline{\quad}$ $4 - 2 = \underline{\quad}$	b. $76 - 2 = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$	c. $88 - 4 = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
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3. Subtract. Cross out dots. Each box marked with a “T” stands for a ten.

a.  $35 - 4 = \underline{\quad}$ $35 - 3 = \underline{\quad}$ $35 - 2 = \underline{\quad}$	b.  $57 - 7 = \underline{\quad}$ $57 - 5 = \underline{\quad}$ $57 - 3 = \underline{\quad}$	c.  $48 - 2 = \underline{\quad}$ $48 - 4 = \underline{\quad}$ $48 - 6 = \underline{\quad}$	d.  $34 - 1 = \underline{\quad}$ $34 - 2 = \underline{\quad}$ $34 - 4 = \underline{\quad}$
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Counting Dimes, Nickels, and Cents



front back

This coin is called a cent or a penny.
We write 1¢.



front back

This coin is called a dime.
It is worth ten cents (10¢).

Count up to find how many cents there are in total:



Two dimes is 20¢.
Four pennies is 4¢.
The total is 24 cents.

1. Count and write the total amount in cents.

a.  _____ ¢

b.  _____ ¢

c.  _____ ¢

d.  _____ ¢

e.  _____ ¢

f.  _____ ¢

g.  _____ ¢