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Foreword

Math Mammoth Grade 1, International Version comprises a complete maths curriculum for the first grade mathematics studies. This curriculum is essentially the same as the U.S. version of Math Mammoth Grade 1, only customised for international use in a few aspects (listed below). The curriculum meets the Common Core Standards in the United States, but it may not perfectly align to the first grade standards in your country. However, you can probably find material for any missing topics in neighbouring grades.

The International version of Math Mammoth differs from the U.S. version in these aspects:

- The currency used in the money chapters in grades 1-3 is the Australian dollar. (The download version of this curriculum for grades 1-3 include the chapter on money for European, South African, Canadian, US, and British currencies.)
- The curriculum teaches the metric measurement units. Imperial units, such as inches and pounds, are not used.
- The spelling conforms to British international standards.
- Paper size is A4.

The four main areas of study for first grade are:

1. Learning the concepts of addition and subtraction, and strategies for remembering addition and subtraction facts (chapters 1-2 and chapter 4);
2. Developing understanding of whole number relationships and place value up to 100 (chapter 3 and chapter 7);
3. Developing the concept that measuring is a process of repeating basic units of length or some other measure (chapter 6); and
4. Reasoning about attributes of geometric shapes, such as the number of sides and the number of corners, and composing and decomposing geometric shapes (chapter 6).

Additional topics we study in the first grade are telling time to the half hour (chapter 5) and counting coins (chapter 8).

The portion of first grade included in this book, Part B, covers strategies for addition and subtraction facts (chapters 4), telling time and reading 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).

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

I wish you success in teaching maths!

Maria Miller, the author

User Guide

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

Basic principles in using Math Mammoth Complete Curriculum

Math Mammoth is mastery-based, which means it concentrates on a few major topics at a time, in order to study them in depth. The two books (parts A and B) are like a “framework”, but you still have a lot of liberty in planning your child’s studies. You can even use it in a *spiral* manner, if you prefer. Simply have your student study in 2-3 chapters simultaneously. In second grade, the addition and subtraction topics are best studied in the order they are presented, but feel free to go through the chapters on geometry, measurement, clock and money in any order you like.

Math Mammoth is not a scripted curriculum. In other words, it is not spelling out in exact detail what the teacher is to do or say. Instead, Math Mammoth gives you, the teacher, various tools for teaching:

- **The two student worktexts** (parts A and B) contain all the lesson material and exercises. They include the explanations of the concepts (the teaching part) in blue boxes. The worktexts also contain some advice for the teacher in the introduction of each chapter.

The teacher can read the teaching part of each lesson before the lesson, or read and study it together with the student in the lesson, or let the student read and study on his own. If you are a classroom teacher, you can copy the examples from the “blue teaching boxes” to the board and go through them on the board.

- There are a lot of **videos** matched to the curriculum available at <https://www.mathmammoth.com/videos/> . There isn’t a video for every lesson, but there are dozens of videos for each grade level. You can simply have the author teach your child or student!
- Don’t automatically assign all the exercises. Use your judgement, trying to assign just enough for your student’s needs. You can use the skipped exercises later for revision. For most students, I recommend to start out by assigning about half of the available exercises. Adjust as necessary.
- Each chapter introduction includes a **link list to various free online games** and activities, matched to the topics of that chapter. These games can be used to supplement the lessons, for learning maths facts or just for some fun.
- The student books contain some **mixed revision lessons**, and the curriculum also provides you with additional **cumulative revision lessons**.
- There is a **chapter test** for each chapter of the curriculum, and a comprehensive end-of-year test.
- The **worksheet maker** allows you to make additional worksheets for most calculation-type topics in the curriculum. You will need Internet access to be able to use it. In the digital version, the worksheet maker is found in the folder titled “For revision”. In the print version, a link to it is found in the introduction just before the cumulative revisions.
- You can use the free online exercises at <https://www.mathmammoth.com/practice/>
This is an expanding section of the site, so check often to see what new topics we are adding to it!
- Some grade levels have **cut-outs**, such as to make fraction manipulatives or geometric solids.
- And of course there are answer keys to everything.

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

How to get started

Have ready the first lesson from the student worktext. Go over the first teaching part (within the blue boxes) together with your child. Go through a few of the first exercises together, and then assign some problems for your child to do on their own.

Repeat this if the lesson has other blue teaching boxes. Naturally, you can also use the videos at <https://www.mathmammoth.com/videos/>

Many children can eventually study the lessons completely on their own — the curriculum becomes self-teaching. However, children definitely vary in how much they need someone to be there to actually teach them.

Pacing the curriculum

Each chapter introduction contains a suggested pacing guide for that chapter. You will see a summary on the right. (This summary does not include time for optional tests.)

The 2-page lessons are intended for one day. The lessons that are 3-4 pages can be covered in two days.

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

The table below lists how many pages there are for the student to finish in this particular grade level, and gives you a guideline for how many pages per day to finish, assuming a 175-day (35-week) school year.

Example:

Worktext 1-A	
Chapter 1	27 days
Chapter 2	21 days
Chapter 3	19 days
TOTAL	67 days

Worktext 1-B	
Chapter 4	14 days
Chapter 5	9 days
Chapter 6	15 days
Chapter 7	25 days
Chapter 8	9 days
TOTAL	72 days

Grade level	School days	Days for tests and revisions	Lesson pages	Days for the student book	Pages to study per day	Pages to study per week
1-A	82	6	121	76	1.6	8
1-B	93	10	128	83	1.5	7.7
Grade 1 total	175	16	249	159	1.6	7.8

The table below is for you to fill in. Allow several days for tests and additional revision before tests — I suggest at least twice the number of chapters in the curriculum. Then, to get a count of “pages to study per day”, **divide the number of lesson pages by the number of days for the student book**. Lastly, multiply this number by 5 to get the approximate page count to cover in a week.

Grade level	School days	Days for tests and revisions	Lesson pages	Days for the student book	Pages to study per day	Pages to study per week
1-A			121			
1-B			128			
Grade 1 total			249			

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

Now, something important. Whenever the curriculum has lots of similar practice problems (a large set of problems), feel free to **only assign 1/2 or 2/3 of those problems**. If your student gets it with less amount of exercises, then that is perfect! If not, you can always assign the rest of the problems for some other day. In fact, you could even use these unassigned problems the next week or next month for some additional revision.

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

Working space, the usage of additional paper and mental maths

The curriculum generally includes working space directly on the page for students to work out the problems. However, feel free to let your students to use extra paper when necessary. They can use it, not only for the “long” algorithms (where you line up numbers to add, subtract, multiply, and divide), but also to draw diagrams and pictures to help organize their thoughts. Some students won't need the additional space (and may resist the thought of extra paper), while some will benefit from it. Use your discretion.

Some exercises don't have any working space, but just an empty line for the answer (e.g. $200 + \underline{\quad} = 1000$). Typically, I have intended that such exercises to be done using MENTAL MATHS.

However, there are some students who struggle with mental maths (often this is because of not having studied and used it in the past). As always, the teacher has the final say (not me!) as to how to approach the exercises and how to use the curriculum. We do want to prevent extreme frustration (to the point of tears). The goal is always to provide SOME challenge, but not too much, and to let students experience success enough so that they can continue enjoying learning maths.

Students struggling with mental maths will probably benefit from studying the basic principles of mental calculations from the earlier levels of Math Mammoth curriculum. To do so, look for lessons that list mental maths strategies. They are taught in the chapters about addition, subtraction, place value, multiplication, and division. My article at https://www.mathmammoth.com/lessons/practical_tips_mental_math also gives you a summary of some of those principles.

Using tests

For each chapter, there is a **chapter test**, which can be administered right after studying the chapter. **The tests are optional**. Some families might prefer not to give tests at all. The main reason for the tests is for diagnostic purposes, and for record keeping. These tests are not aligned or matched to any standards.

In the digital version of the curriculum, the tests are provided both as PDF files and as html files. Normally, you would use the PDF files. The html files are included so you can edit them (in a word processor such as Word or LibreOffice), in case you want your student to take the test a second time. Remember to save the edited file under a different file name, or you will lose the original.

The end-of-year test is best administered as a diagnostic or assessment test, which will tell you how well the student remembers and has mastered the mathematics content of the entire grade level.

Using the cumulative revisions and the worksheet maker

The student books contain mixed revision lessons which revise concepts from earlier chapters. The curriculum also comes with additional cumulative revision lessons, which are just like the mixed revisions in the student books, with a mix of problems covering various topics. These are found in their own folder in the digital version, and in the Tests & Cumulative Revisions book in the print version.

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

The cumulative revisions are optional; use them as needed. They are named indicating which chapters of the main curriculum the problems in the revision come from. For example, “Cumulative Revision, Chapter 4” includes problems that cover topics from chapters 1-4.

Both the mixed and cumulative revisions allow you to spot areas that the student has not grasped well or has forgotten. When you find such a topic or concept, you have several options:

1. Check if the worksheet maker lets you make worksheets for that topic.
2. Check for any online games and resources in the Introduction part of the particular chapter in which this topic or concept was taught.
3. If you have the digital version, you could simply reprint the lesson from the student worktext, and have the student restudy that.
4. Perhaps you only assigned 1/2 or 2/3 of the exercise sets in the student book at first, and can now use the remaining exercises.
5. Check if our online practice area at <https://www.mathmammoth.com/practice/> has something for that topic.
6. Khan Academy has free online exercises, articles, and videos for most any maths topic imaginable.

Concerning challenging word problems and puzzles

While this is not absolutely necessary, I heartily recommend supplementing Math Mammoth with challenging word problems and puzzles. You could do that once a month, for example, or more often if the student enjoys it.

The goal of challenging story problems and puzzles is to **develop the student’s logical and abstract thinking and mental discipline**. I recommend starting these in fourth grade, at the latest. Then, students are able to read the problems on their own and have developed mathematical knowledge in many different areas. Of course I am not discouraging students from doing such in earlier grades, either.

Math Mammoth curriculum does contain a lot of word problems. Even so, the problems I have created are usually tied to a specific concept or concepts. I feel students can benefit from solving problems and puzzles that require them to think “out of the box” or are just different from the ones I have written.

I recommend Math Stars problem-solving newsletters (free) as a main resource for challenging problems: <https://www.homeschoolmath.net/teaching/math-stars.php>

I have also compiled a list of other resources for problem solving practice, which you can access at this link: <https://l.mathmammoth.com/challengingproblems>

Another idea: search online for “brain puzzles for kids,” “logic puzzles for kids” or “brain teasers for kids.”

Frequently asked questions and contacting us

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

Additionally, you can contact us using the contact form at the Math Mammoth.com website.

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

Chapter 4: Addition and Subtraction Facts

Introduction

This chapter provides lots of practice for learning and memorising the basic addition and subtraction facts with numbers from 0 to 10.

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 entitled *Addition and Subtraction Facts With...* aim to help the student to memorise the basic facts for numbers from 0 to 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 practise 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 judgement, and only assign a certain portion, such as half of them, at first. The rest of them can then be used later as a revision. If assigning only half of the exercises is not enough, adjust as necessary.

Alongside this book, you can also use maths games or flashcards to reinforce these facts. You will find a list of some free online 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 addition and subtraction facts are essential for later study, such as when students add $24 + 2$ (in chapter 7). However, if the child has not memorised these facts before the end of the chapter, don’t worry. Go on with the curriculum, but keep practising the facts with games, worksheets, drills, *etc.*, until they master them.

Besides practising the facts, the student will also solve word problems, fill in number patterns, get used to a symbol that represents an unknown number, compare expressions, and subtract more than one number at a time.

Pacing Suggestion for Chapter 4

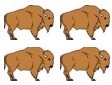
This table does not include the chapter test as it is found in a different book (or file). Please add one day to the pacing for the test if you will use it.

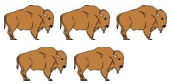
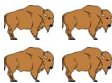
The Lessons in Chapter 4	page	span	suggested pacing	your pacing
Addition and Subtraction Facts with 4 and 5	15	2 pages	1 day	
Addition and Subtraction Facts with 6	17	3 pages	2 days	
Addition and Subtraction Facts with 7	20	2 pages	1 day	
Addition and Subtraction Facts with 8	22	4 pages	2 days	
Addition and Subtraction Facts with 9	26	3 pages	2 days	
Addition and Subtraction Facts with 10	29	4 pages	2 days	
Subtracting More Than One Number	33	2 pages	1 day	
Revision – Facts with 6, 7, and 8	35	2 pages	1 day	
Revision – Facts with 9 and 10	37	3 pages	2 days	
Chapter 4 Test (optional)				
TOTALS		25 pages	14 days	

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

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Addition and Subtraction Facts with 4 and 5

Facts with 4		$4 + 0 = 4$	$4 - 4 = 0$
		$0 + 4 = 4$	$4 - 0 = 4$
	 	$1 + 3 = 4$	$4 - 3 = 1$
		$3 + 1 = 4$	$4 - 1 = 3$
	 	$2 + 2 = 4$	$4 - 2 = 2$

Facts with 5		$5 + 0 = 5$	$5 - 5 = 0$
		$\underline{\quad} + \underline{\quad} = 5$	$5 - \underline{\quad} = \underline{\quad}$
	 	$4 + 1 = 5$	$5 - 4 = \underline{\quad}$
		$1 + 4 = 5$	$5 - \underline{\quad} = \underline{\quad}$
	 	$3 + 2 = 5$	$5 - 3 = \underline{\quad}$
		$\underline{\quad} + \underline{\quad} = 5$	$5 - \underline{\quad} = \underline{\quad}$

1. Find the missing numbers.

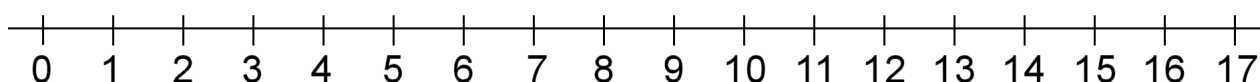
a.	b.	c.	d.
$3 + \underline{\quad} = 4$	$2 + \underline{\quad} = 5$	$5 - 0 = \underline{\quad}$	$4 - 0 = \underline{\quad}$
$1 + \underline{\quad} = 4$	$1 + \underline{\quad} = 5$	$5 - 4 = \underline{\quad}$	$4 - 3 = \underline{\quad}$
$1 + \underline{\quad} = 5$	$4 + \underline{\quad} = 5$	$5 - 2 = \underline{\quad}$	$5 - 1 = \underline{\quad}$
$2 + \underline{\quad} = 4$	$3 + \underline{\quad} = 5$	$4 - 1 = \underline{\quad}$	$4 - 2 = \underline{\quad}$

2. Colour the square:

- yellow if the answer is 0
- red if the answer is 1
- blue if the answer is 2
- green if the answer is 3
- purple if the answer is 4
- orange if the answer is 5

$5 - 4$	$2 + 3$	$4 - 4$	$1 + 2$	$4 - 2$	$1 + 3$
$2 + 2$	$3 - 2$	$5 - 0$	$0 + 0$	$5 - 2$	$1 + 1$
$0 + 2$	$5 - 1$	$0 + 1$	$1 + 4$	$0 - 0$	$4 - 1$

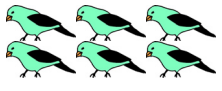
3. Continue the patterns until the boxes are full.



a.	b.	c.
$17 - 0 = \underline{\quad}$	$10 + \underline{\quad} = 10$	$5 - 2 = \underline{\quad}$
$17 - 1 = \underline{\quad}$	$10 + \underline{\quad} = 11$	$6 - 2 = \underline{\quad}$
$17 - 2 = \underline{\quad}$	$10 + \underline{\quad} = 12$	$7 - 2 = \underline{\quad}$
$17 - \underline{\quad} = \underline{\quad}$	$10 + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - 2 = \underline{\quad}$
$17 - \underline{\quad} = \underline{\quad}$	$\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
$\underline{\quad} - \underline{\quad} = \underline{\quad}$	$\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$
$\underline{\quad} - \underline{\quad} = \underline{\quad}$	$\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$

Addition and Subtraction Facts with 6

1. Complete the fact families in which the sum is six. At the top, write the three numbers that you are using for the fact family.

6, 0, 6

$6 + 0 = 6$ $\underline{\quad} + \underline{\quad} = 6$ $6 - 6 = 0$ $6 - 0 = 6$

$\underline{\quad}, \underline{\quad}, 6$

$5 + 1 = 6$ $\underline{\quad} + \underline{\quad} = 6$ $6 - 5 = \underline{\quad}$ $6 - \underline{\quad} = \underline{\quad}$

$\underline{\quad}, \underline{\quad}, 6$

$4 + 2 = 6$ $\underline{\quad} + \underline{\quad} = 6$ $6 - 4 = \underline{\quad}$ $6 - \underline{\quad} = \underline{\quad}$

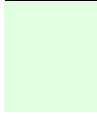
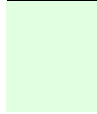
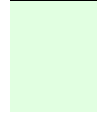
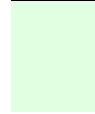
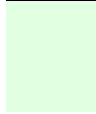
$\underline{\quad}, \underline{\quad}, 6$

$3 + 3 = 6$ $6 - 3 = \underline{\quad}$

2. Write the numbers that add up to 6. Memorise these!

$0 + \underline{\quad} = 6$	or	$\underline{\quad} + 0 = 6$
$1 + \underline{\quad} = 6$	or	$\underline{\quad} + 1 = 6$
$2 + \underline{\quad} = 6$	or	$\underline{\quad} + 2 = 6$
$3 + \underline{\quad} = 6$		

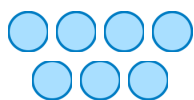
3. Subtract.

a.	6	b.	6	c.	6	d.	6	e.	6	f.	6
	-5		-4		-6		-2		-1		-3
											

4. Play the “10 Out” card game but adapt it for “6 Out” (see p. 12, in the introduction to this chapter).

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Subtracting More Than One Number

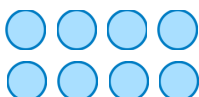


You have 7 circles. First you take away 1 circle, and then you take away 2 more circles. You will have 4 circles left. $7 - 1 - 2 = 4$.

$$7 - 1 - 2 = ?$$

1. Subtract twice, taking away circles. You can cover or cross out the circles to help.

a.

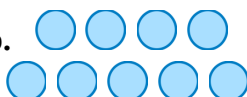


$$8 - 2 - 3 = \underline{\quad}$$

$$8 - 5 - 2 = \underline{\quad}$$

$$8 - 1 - 3 = \underline{\quad}$$

b.

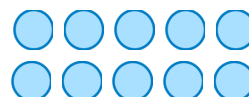


$$9 - 3 - 1 = \underline{\quad}$$

$$9 - 4 - 2 = \underline{\quad}$$

$$9 - 2 - 5 = \underline{\quad}$$

c.



$$10 - 5 - 3 = \underline{\quad}$$

$$10 - 6 - 2 = \underline{\quad}$$

$$10 - 1 - 4 = \underline{\quad}$$

2. Solve. You can draw pictures to help.

- a. Mary had ten cookies. She gave two to her brother and two to her sister.
How many does she have left?

- 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?

- c. Eight cars were in the parking lot. Then three cars left. After that two more cars left. How many cars are there now?

- d. Jack had \$5. His mother gave him \$1, and his father gave him \$2.
How many dollars does Jack have now?

You can subtract two numbers one at a time:

$$\begin{array}{r} 8 - 2 \\ \backslash \quad / \\ 6 \end{array} - 3 = 3$$

First take away 2. That leaves 6.
Then, from 6, subtract 3. That leaves 3.

OR you can subtract their total:

$$\begin{array}{r} 8 - 2 - 3 \\ \backslash \quad / \\ 8 - 5 \end{array} = 3$$

Check how much you need to subtract or take away in total. You need to subtract 2 and 3, or a total of 5. So, subtract $8 - 5 = 3$.

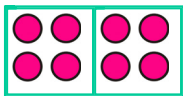
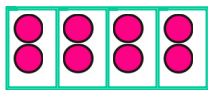
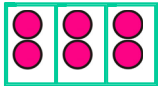
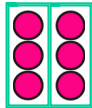
3. Subtract by either method.

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

4. Solve. Compare the two problems and their results.

a. $10 - 3 - 2 = \underline{\quad}$ $10 - 3 - 3 = \underline{\quad}$	b. $7 - 3 - 3 = \underline{\quad}$ $7 - 4 - 3 = \underline{\quad}$	c. $9 - 6 - 1 = \underline{\quad}$ $8 - 6 - 1 = \underline{\quad}$
---	---	---

5. Match the subtraction problems to the correct pictures.

	a. $8 - 2 - 2 - 2 - 2 = 0$	
	b. $8 - 4 - 4 = 0$	
	c. $6 - 2 - 2 - 2 = 0$	
	d. $6 - 3 - 3 = 0$	

Puzzle Corner

Here are some problems with four numbers!

$$9 - 3 - 2 - 1 = \underline{\quad} \quad 10 - 1 - 2 - 1 = \underline{\quad} \quad 8 - 4 - 1 - 2 = \underline{\quad}$$

Revision — Facts with 6, 7, and 8

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

a.	b.	c.	d.
$0 + \underline{\quad} = 8$	$3 + \underline{\quad} = 7$	$6 - \underline{\quad} = 2$	$7 - \underline{\quad} = 2$
$3 + \underline{\quad} = 8$	$5 + \underline{\quad} = 7$	$6 - \underline{\quad} = 5$	$8 - \underline{\quad} = 3$
$2 + \underline{\quad} = 8$	$1 + \underline{\quad} = 7$	$6 - \underline{\quad} = 3$	$6 - \underline{\quad} = 1$
$6 + \underline{\quad} = 8$	$6 + \underline{\quad} = 7$	$6 - \underline{\quad} = 4$	$8 - \underline{\quad} = 4$
$5 + \underline{\quad} = 8$	$2 + \underline{\quad} = 7$	$6 - \underline{\quad} = 1$	$7 - \underline{\quad} = 4$

2. First add or subtract. Write the answers below. Then compare, and write $<$, $>$ or $=$.

a. $8 - 2$? $7 - 3$ ↓ ↓ 	b. $10 - 7$? $9 - 6$ ↓ ↓ 	c. $7 - 6$? $4 - 2$ ↓ ↓
d. $4 + 2$ $9 - 8$	e. $10 - 4$ $7 - 4$	f. $3 + 4$ $7 - 1$

3. Solve.

a. Karen and Frank were playing a game. Karen had 9 cards and Frank had 4.
How many more cards did Karen have than Frank?

b. Karen gave one card to Frank. Now who has more cards?

How many more?

4. Complete. Then draw lines to connect the facts from the same fact family.

$$\begin{array}{l} \underline{\quad} - 5 = 1 \\ 2 + \underline{\quad} = 7 \\ 8 - \underline{\quad} = 3 \\ \underline{\quad} + 2 = 8 \\ 6 - 4 = \underline{\quad} \end{array}$$

$$\begin{array}{l} 7 - 5 = \underline{\quad} \\ \underline{\quad} + 2 = 6 \\ 6 - 1 = \underline{\quad} \\ 5 + \underline{\quad} = 8 \\ 8 - \underline{\quad} = 6 \end{array}$$

$$\begin{array}{l} 8 - 3 = \underline{\quad} \\ 5 + \underline{\quad} = 7 \\ 1 + 5 = \underline{\quad} \\ 8 - 6 = \underline{\quad} \\ 2 + 4 = \underline{\quad} \end{array}$$

5. Complete. Then draw lines to connect the facts from the same fact family.

$$\begin{array}{l} 3 + \underline{\quad} = 7 \\ 6 - \underline{\quad} = 3 \\ \underline{\quad} + 1 = 8 \\ \underline{\quad} - 4 = 4 \\ 7 - 1 = \underline{\quad} \end{array}$$

$$\begin{array}{l} \underline{\quad} + 6 = 7 \\ \underline{\quad} - 7 = 1 \\ 3 + 3 = \underline{\quad} \\ 4 + \underline{\quad} = 7 \\ 8 - \underline{\quad} = 4 \end{array}$$

$$\begin{array}{l} 8 - \underline{\quad} = 7 \\ 1 + 6 = \underline{\quad} \\ 3 + \underline{\quad} = 6 \\ 8 - 4 = \underline{\quad} \\ 7 - \underline{\quad} = 4 \end{array}$$

Puzzle Corner

What numbers can go into the squares?
All the numbers are less than 10. Guess and check!

	+		= 8
-		-	
	+		= 6

|| ||

0 2

	+		= 7
+		-	
	-		= 4

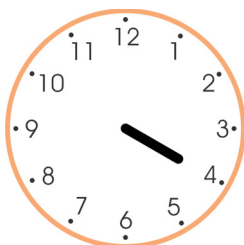
|| ||

8 3

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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”.

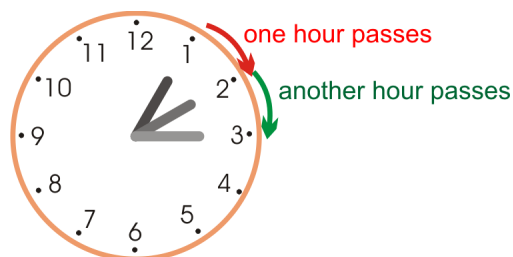


The hour hand points to eleven - it is eleven hours, or “eleven o’clock”.

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.



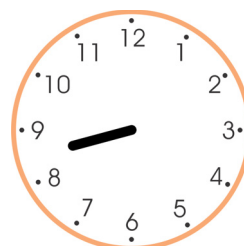
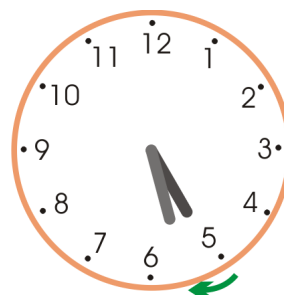
On this clock, the hour hand pointed to 5 when it was five o’clock.

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

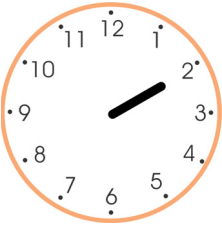
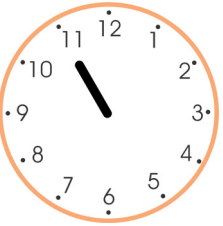
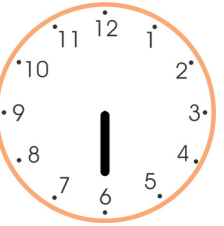
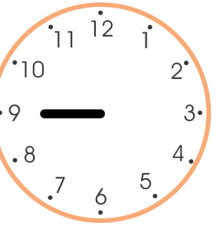
It takes the hour hand one-half hour to move from five to halfway between five and six.

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

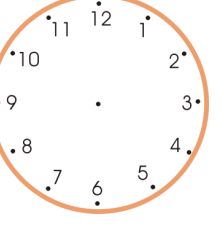
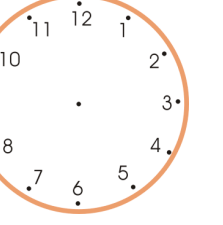
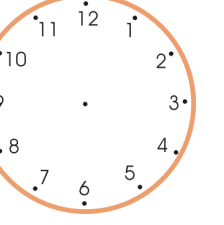
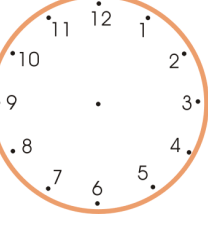
In half an hour it will be nine o’clock.



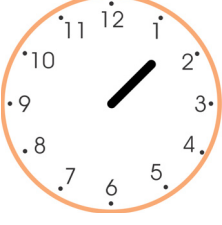
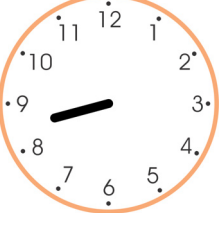
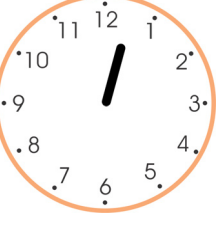
1. Write the time under each clock face.

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

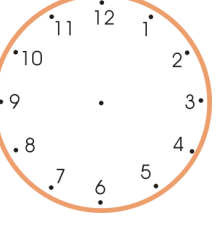
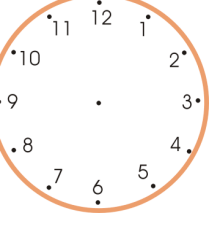
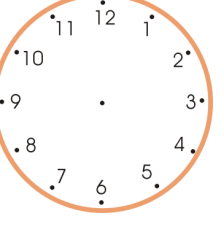
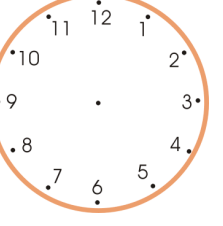
2. Draw the hour hand.

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

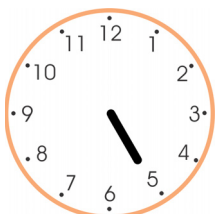
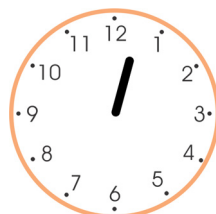
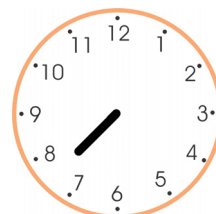
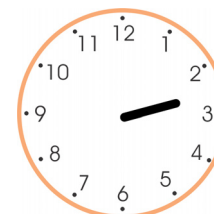
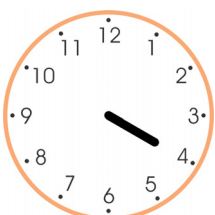
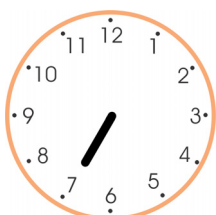
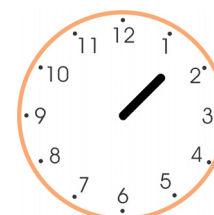
3. Write the time.

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

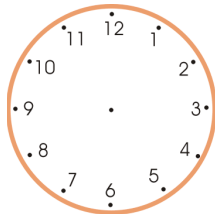
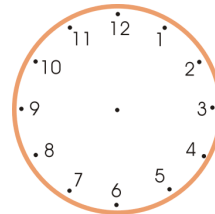
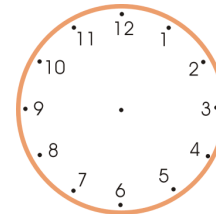
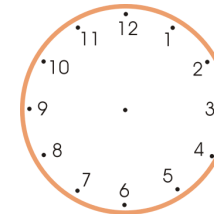
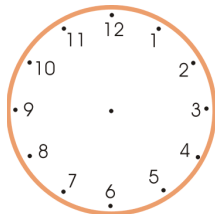
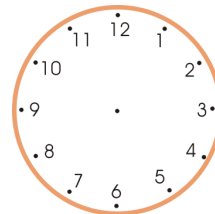
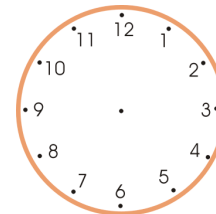
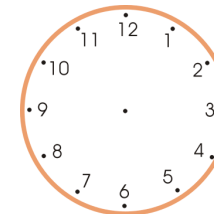
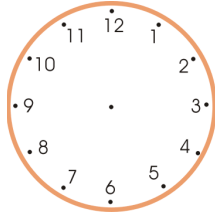
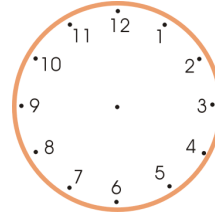
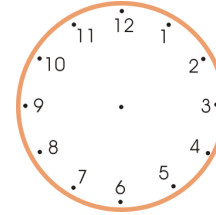
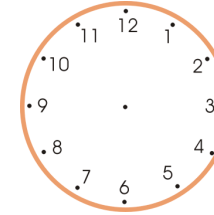
4. Draw the hour hand.

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

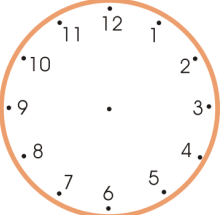
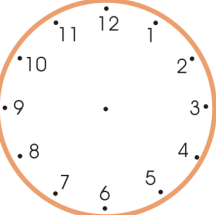
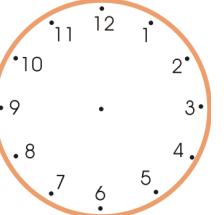
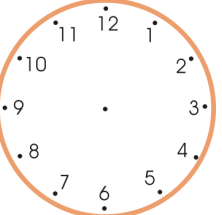
5. Write the time!

a.  _____ _____	b.  _____ _____	c.  _____ _____	d.  _____ _____
e.  _____ _____	f.  _____ _____	g.  _____ _____	h.  _____ _____

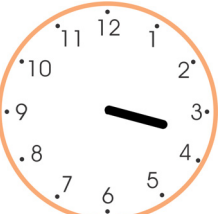
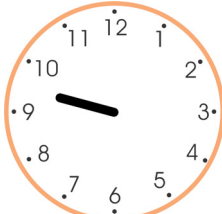
6. Draw an hour hand on each clock. In the second row, show the time a half-hour later. In the third row, show the time another half-hour later (than the clock in the second row).

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

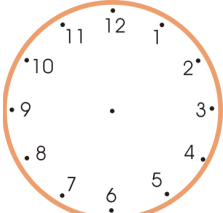
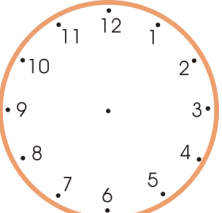
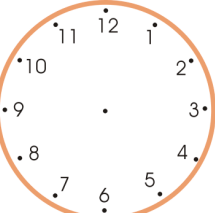
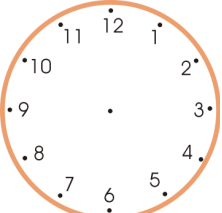
7. Draw the hour hand on each clock. Then write the time that the clock will show a half-hour later.

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

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

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

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

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

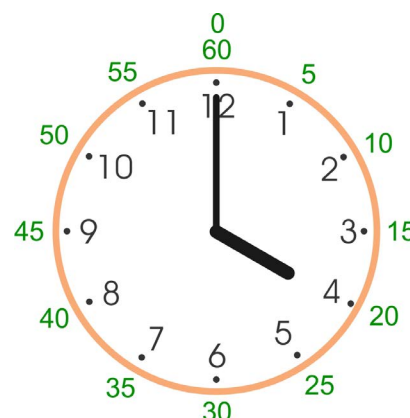
Minutes and Half Hours

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.”

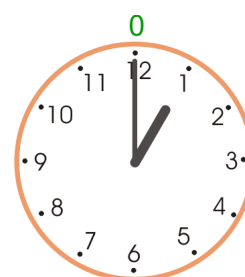
Move the hour hand from 1 to 2, and observe the minute hand!

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)

- You know these from the previous lesson. Now the minute hand is added. Write the time using the expressions *o'clock* and *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.

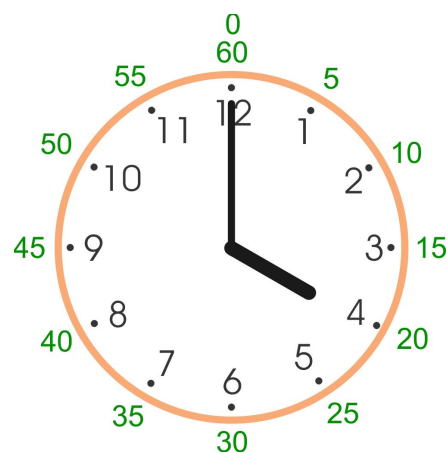
Now let the hour hand travel from 2 to half-past 2 (only half an hour). The minute hand travelled from 0 minutes to 30 minutes.

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 travelled from 30 minutes to _____ (or 0) minutes.



It is 4:00.

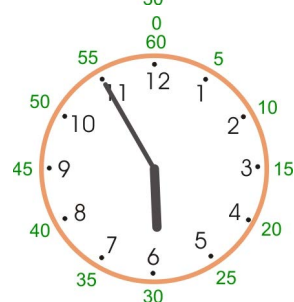
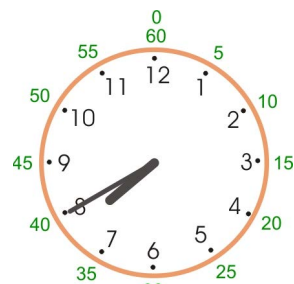
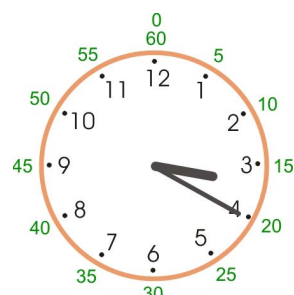
The green numbers are for the minutes. Just count by fives to learn them!

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* it's 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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AM and PM

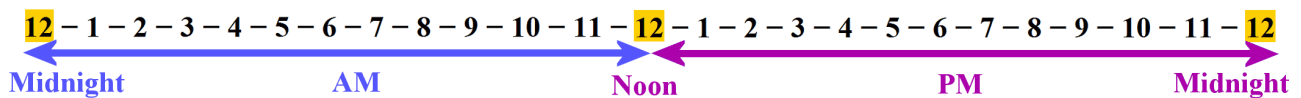
The 12 clock hours before noon are marked with AM.

The 12 clock hours after noon are marked with PM.

AM is short for Latin *Ante Meridiem*, which means “before noon”.

PM comes from Latin *Post Meridiem* (Latin), which means “after noon”.

NOON is when the sun is at its highest point. It is the middle of the day, and people usually eat lunch around noon.



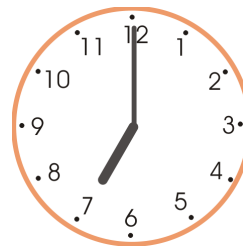
So, from midnight, for the rest of the night, at sunrise, and all through the morning until NOON (when the sun is at its highest), the hours are AM.

After noon, in the afternoon, when the sun is going down, when the sun sets, and all through the evening until midnight, the hours are PM.

The clock has only 12 hours, but our day and night together have 24 hours.

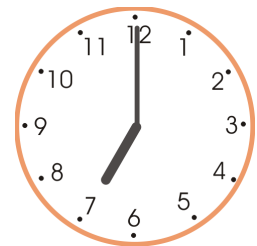
That is why the hour hand travels through those 12 hours *two* times in one day-night period: $12 + 12 = 24$.

So every clock hour (such as 7:00) happens two times during one day-night period.



7:00 AM

This is before noon,
early in the morning.

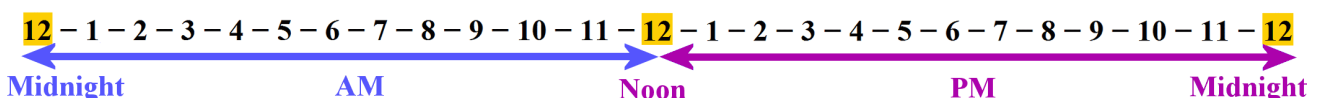


7:00 PM

This is after noon,
during the evening.

Because of the meaning of AM and PM, noon is technically neither. The same is true of midnight. However, most people consider noon to be 12 PM (the beginning of the PM) and midnight to be 12 AM (the beginning of the AM). You can say, “12 o’clock noon” or “12 o’clock midnight” to avoid confusion.

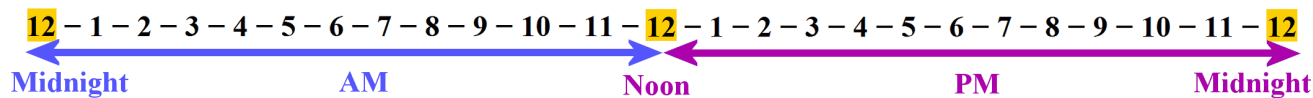
1. a. Mark on the hour line when you usually wake up and when you usually go to bed.
- b. Mark your sleeping hours with black.
- c. Mark on the hour line when you eat some of your main meals.



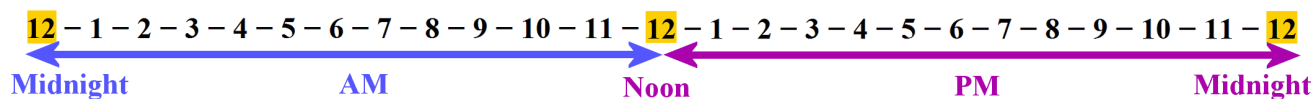
Sample worksheet from
<https://www.mathmammoth.com>

2. Mark on the hour line when the SUN usually rises and when it usually sets.
 Colour the night-time hours black.
 (Ask your teacher to help you make different charts for different seasons.)

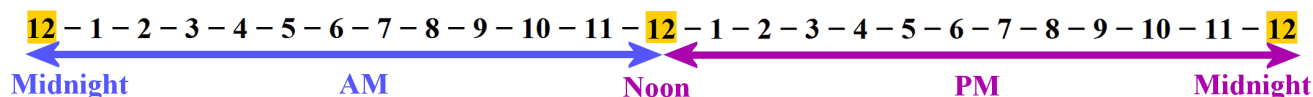
a. The middle of winter



b. Spring.



c. Summer.



3. Write what you are usually doing at these times of day.

a. 5:00 AM _____

b. 8:00 AM _____

c. 12:00 noon _____

d. 3:00 PM _____

e. 6:00 PM _____

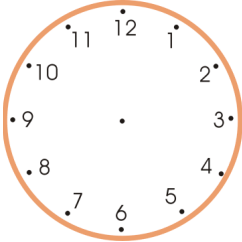
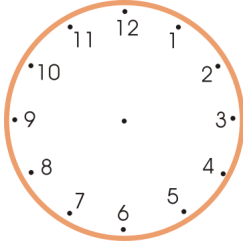
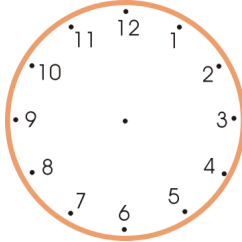
f. 9:00 PM _____

g. 12:00 midnight _____

4. Is it before noon, or not? Write either AM or PM for each situation.

a. The birds are awake and singing, but most people are still in bed.		b. Mother is watching the evening news on TV.	
c. It is time to start schoolwork!		d. The sun is shining brightly.	
e. It is quiet and dark outside.		f. It is night.	
g. We are eating lunch.		h. Jared went to bed three hours ago.	

5. Draw the hour and minute hands on the clock so it matches the situation. Then write the time, including AM or PM.

 a. I wake up _____ : _____	 b. I eat lunch _____ : _____	 c. I eat dinner _____ : _____
---	---	--

The Calendar

January Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	February Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	March Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
April Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	May Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	June Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
July Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	August Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	September Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
October Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	November Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	December Su Mo Tu We Th Fr Sa 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

1. Circle these dates on the calendar above.

- | | | |
|---------------|------------------|------------------------------|
| a. 15 March | b. 18 November | c. 29 December |
| d. 8 February | e. 11 November | f. 30 October |
| g. today | h. your birthday | i. any other important dates |

2. What do the letters “Su Mo Tu We Th Fr Sa” mean?

3. Try not to look at the calendar. Write the name of the month that goes in between.

- | | | |
|------------|-------|----------|
| a. August | _____ | October |
| b. March | _____ | May |
| c. June | _____ | August |
| d. January | _____ | March |
| e. October | _____ | December |

4. (Use the calendar above.) What day of the week is...

- | | | | |
|--------------|-------|------------------|-------|
| a. 4 January | _____ | b. 14 May | _____ |
| c. 23 July | _____ | d. 10 March | _____ |
| e. today | _____ | f. your birthday | _____ |

5. Find all of the MONDAYS in June. Write their dates below:

_____ June	_____ June	_____ June	_____ June	_____ June
------------	------------	------------	------------	------------

6. Find all of the THURSDAYS in April. Write their dates below:

_____ April	_____ April	_____ April	_____ April	_____ April
-------------	-------------	-------------	-------------	-------------

7. Can you name the months in order from memory?

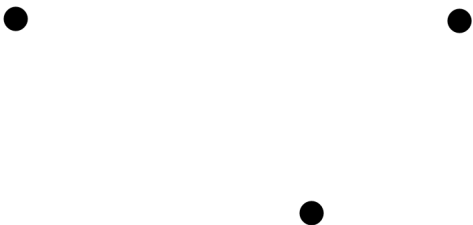
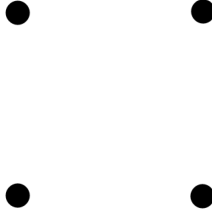
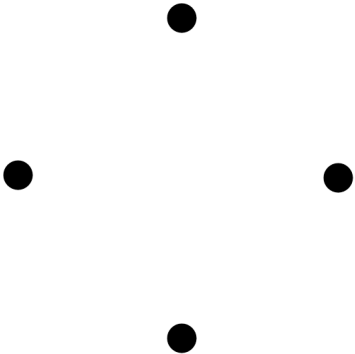
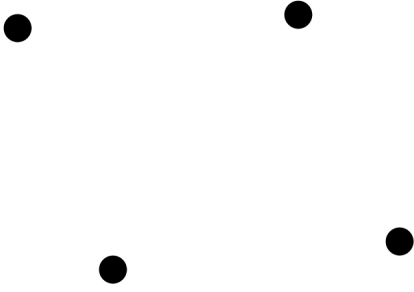
Practise memorising them in groups of four.

- January, February, March, April;
- May, June, July, August;
- September, October, November, December.
(These are all the months ending in “ber”!)

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Drawing Basic Shapes

1. Use a ruler to join the dots carefully with straight lines. What shape do you get?

 a. triangle / square / rectangle / other four-sided shape	 b. triangle / square / rectangle / other four-sided shape
 c. triangle / square / rectangle / other four-sided shape	 d. triangle / square / rectangle / other four-sided shape
 e. triangle / square / rectangle / other four-sided shape	 f. triangle / square / rectangle / other four-sided shape

2. **a.** Draw four dots anywhere in this space. Join the dots with lines. Use a ruler!

What shape did you get?

A square, a rectangle, or just a four-sided shape?

b. In this space try to draw four dots in this space so that you get a rectangle.

c. Draw a rectangle. This time, try using a book to make the corners square.

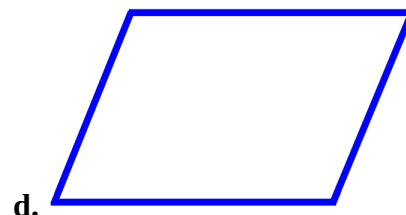
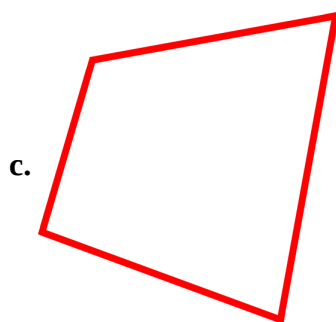
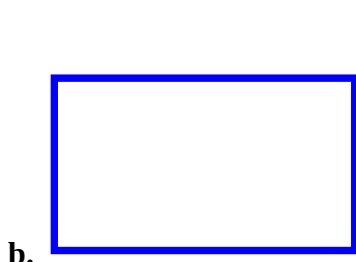
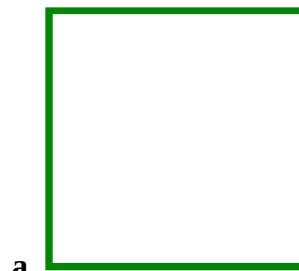
3. Figures (a), (b), (c), and (d) below are all quadrilaterals (four-sided shapes).
In each shape, draw a line from one corner to the opposite corner.

What kind of shapes do you get now? _____

Now draw another line from corner to corner in each shape, using the two other corners you have not used yet.

How many parts does each four-sided shape have now? _____

What kind of shapes are these parts? _____

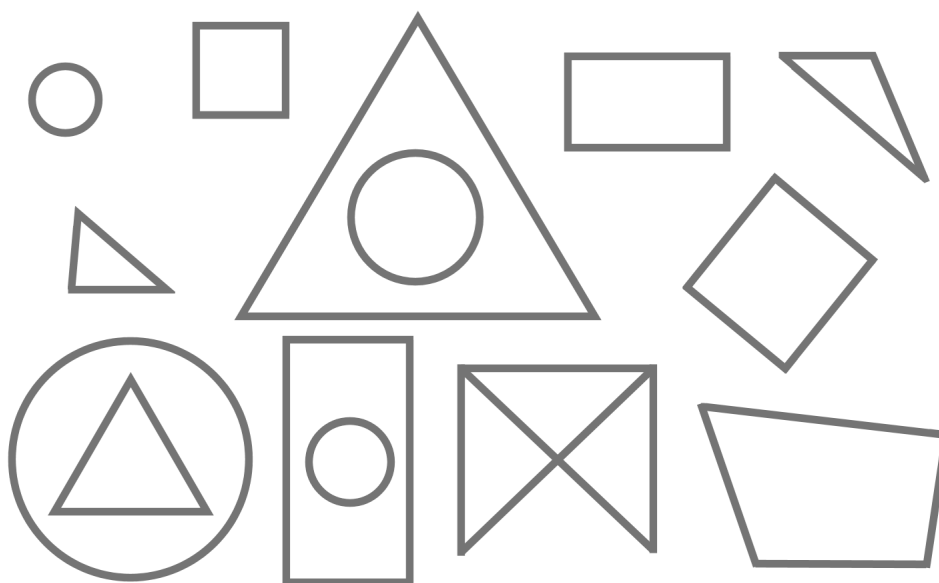


4. Choose a colour for each kind of shape, and colour them in!

Triangles are _____. Circles are _____.

Squares are _____. Rectangles are _____.

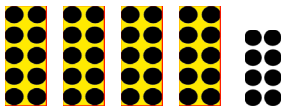
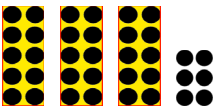
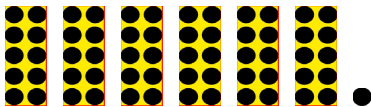
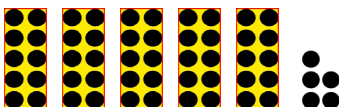
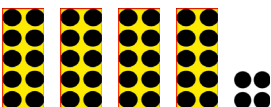
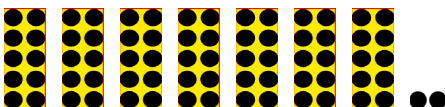
Other four-sided shapes are _____.



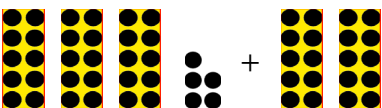
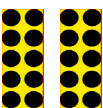
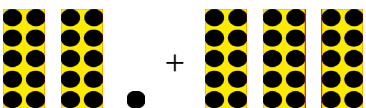
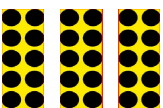
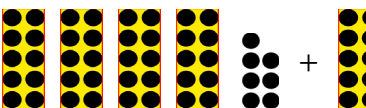
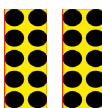
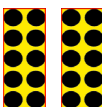
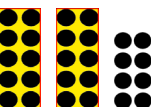
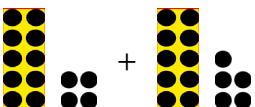
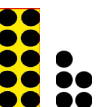
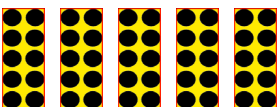
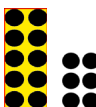
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Adding or Subtracting Two-Digit Numbers

1. Subtract. Cover with your fingers, or cross out, what needs to be subtracted.

 a. $48 - 20 = \underline{\quad}$	 b. $36 - 30 = \underline{\quad}$	 c. $61 - 50 = \underline{\quad}$
 d. $55 - 40 = \underline{\quad}$	 e. $44 - 30 = \underline{\quad}$	 f. $72 - 50 = \underline{\quad}$

2. Add. You can also use an abacus to help you, instead of the pictures.

 +  a. $35 + 20 = \underline{\quad}$	 +  b. $21 + 30 = \underline{\quad}$	 +  c. $47 + 20 = \underline{\quad}$
 +  d. $20 + 28 = \underline{\quad}$	 +  e. $14 + 15 = \underline{\quad}$	 +  f. $50 + 16 = \underline{\quad}$

3. A challenge! These might be a little difficult, so use the 100-bead abacus if you need help.

a.	b.	c.
$35 + 20 = \underline{\quad}$	$40 + 17 = \underline{\quad}$	$33 - 20 = \underline{\quad}$
$76 + 30 = \underline{\quad}$	$30 + 33 = \underline{\quad}$	$78 - 50 = \underline{\quad}$
$22 + 50 = \underline{\quad}$	$56 - 20 = \underline{\quad}$	$99 - 40 = \underline{\quad}$

We can write the numbers to be added or subtracted one under the other in the boxes.

Then we add or subtract the ones in their own column (marked orange).

Then we add or subtract the tens in their own column (marked green).

	tens	ones
	4	5
+	2	3
	6	8

Which numbers were added?
What is the answer?

	tens	ones
	7	8
-	5	6
	2	2

Which numbers were subtracted?
What is the answer?

4. Add.

a.

	tens	ones
	4	2
+	2	4

b.

	tens	ones
	5	3
+	0	6

c.

	tens	ones
	2	5
+	5	3

d.

	tens	ones
	3	5
+	0	4

5. Subtract.

a.

	tens	ones
	9	5
-	2	0

b.

	tens	ones
	5	8
-	2	6

c.

	tens	ones
	2	5
-	0	3

d.

	tens	ones
	7	9
-	6	4

6. Write one number under the other in the boxes and add.

a. $17 + 21$

+		

b. $34 + 14$

+		

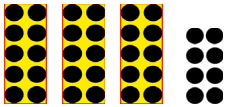
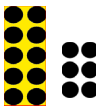
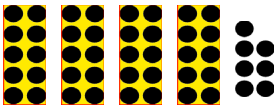
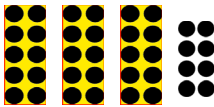
c. $51 + 7$

+		

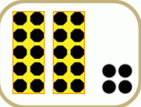
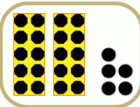
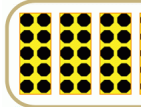
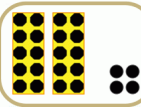
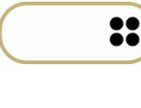
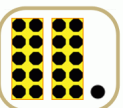
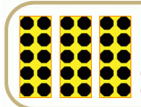
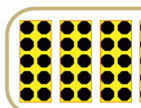
d. $32 + 5$

+		

7. Subtract. Either use the picture or write the second number under the first in the boxes.

 a. $38 - 14 = \underline{\hspace{2cm}}$ <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 30px; height: 30px;">3</td><td style="width: 30px; height: 30px;">8</td></tr> <tr><td style="width: 30px; height: 30px;">1</td><td style="width: 30px; height: 30px;">4</td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>	3	8	1	4			 b. $16 - 3 = \underline{\hspace{2cm}}$ <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 30px; height: 30px;">1</td><td style="width: 30px; height: 30px;">6</td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;">3</td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>	1	6		3		
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 c. $47 - 25 = \underline{\hspace{2cm}}$ <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>							 d. $38 - 26 = \underline{\hspace{2cm}}$ <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>						

8. The dots show the numbers to add. Write the numbers in the boxes. Add.

a.  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;">2</td><td style="width: 30px; height: 30px;">4</td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;">1</td><td style="width: 30px; height: 30px;">3</td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>	tens	ones	2	4			tens	ones	1	3			b.  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>	tens	ones					tens	ones					c.  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>  <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><th style="width: 30px;">tens</th><th style="width: 30px;">ones</th></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> <tr><td style="width: 30px; height: 30px;"> </td><td style="width: 30px; height: 30px;"> </td></tr> </table>	tens	ones					tens	ones				
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9. You should be able to do these problems in your head, without any help!

a. $30 + 20 = \underline{\hspace{2cm}}$ $60 + 20 = \underline{\hspace{2cm}}$ $30 + 50 = \underline{\hspace{2cm}}$	b. $40 + 60 = \underline{\hspace{2cm}}$ $30 + 30 = \underline{\hspace{2cm}}$ $50 - 20 = \underline{\hspace{2cm}}$	c. $60 - 40 = \underline{\hspace{2cm}}$ $70 - 50 = \underline{\hspace{2cm}}$ $90 - 40 = \underline{\hspace{2cm}}$
---	---	---

10. Write the numbers in the boxes. Subtract the tens and the ones in their columns.

a. $57 - 21$

-	

b. $74 - 14$

-	

c. $59 - 7$

-	

d. $99 - 58$

-	

11. Solve the word problems. You can use an abacus to help, or write the numbers one under the other in the boxes.

- a. George went fishing and caught 28 fish. His wife cooked 11 fish for supper and put the rest into the freezer. How many fish did she put into the freezer?

- b. If you buy sunglasses for \$22 and a watch for \$34, how much do you have to pay for both items?

- c. Mother is 38 years old and John is 11. How many years older is Mother than John?

- d. Beth had 34 coloured pencils and Lenny had 22. Beth gave Lenny 6 pencils. Now how many does Lenny have?

Completing the Next Ten

Revision:

What numbers make 10?

You need to remember these!

$1 + \underline{\quad} = 10$

$8 + \underline{\quad} = 10$

$3 + \underline{\quad} = 10$

$7 + \underline{\quad} = 10$

$5 + \underline{\quad} = 10$

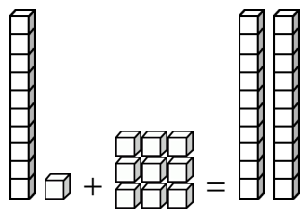
$6 + \underline{\quad} = 10$

$4 + \underline{\quad} = 10$

$9 + \underline{\quad} = 10$

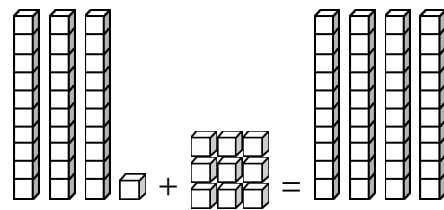
$2 + \underline{\quad} = 10$

Completing the ten



$11 + 9 = 20$

The 1 and the 9 single cubes make a *new* ten. We get a total of 20.

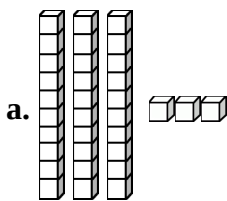


$31 + 9 = 40$

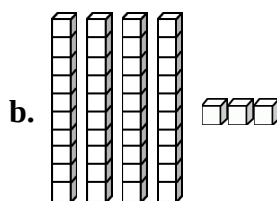
The 1 and the 9 single cubes make a *new* ten. We get a total of 40.

1. Draw more single blocks until there are ten of them. Circle the new ten.

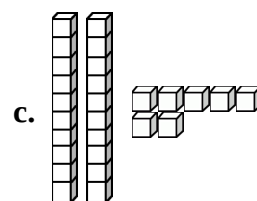
Write the addition that completes the next ten. You can also do these with an abacus.



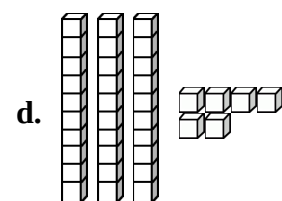
$33 + \underline{\quad} = \underline{40}$



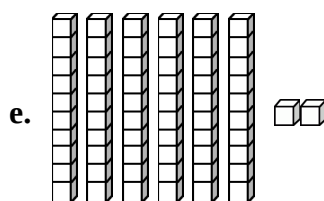
$43 + \underline{\quad} = \underline{\quad}$



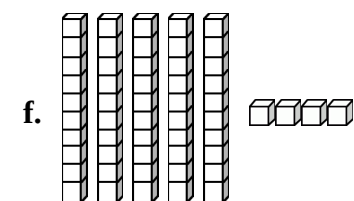
$27 + \underline{\quad} = \underline{\quad}$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$



$\underline{\quad} + \underline{\quad} = \underline{\quad}$

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Practising Shopping

1. Make these amounts of money. You can use real money or draw the coins.

a. 40 cents	b. 35 cents	c. 85 cents
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2. You have:

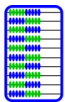
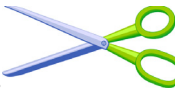
Draw the coins you would use to pay for an item that costs:

a. 45 cents	b. 65 cents	c. 90 cents
d. 20 cents	e. 85 cents	f. 55 cents

3. Write the total amount in cents, if you have:

a. two 20c coins and three 5c coins _____ c	b. four 10c coins and four 5c coins _____ c
c. a 2-dollar coin and five 10c coins \$ _____	d. four 1-dollar coins and five 5c coins \$ _____

4. Cross out the coins you need to buy the item. Write how many cents you have left.

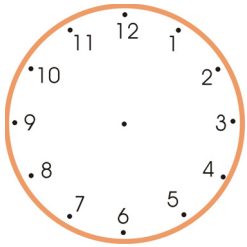
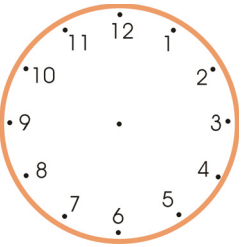
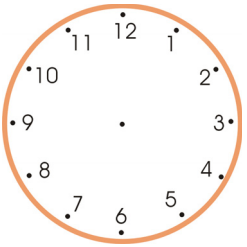
a.  30c  Left _____c	b.  80c  Left _____c	c.  50c  Left _____c
d.  65c  Left _____c	e.  \$7.95  Left \$ _____	f.  \$9.55  Left \$ _____
g.  \$1.75  Left \$ _____	h.  \$11.50  Left \$ _____	i.  25c  Left _____ c

Mixed Revision, Chapter 8

1. Find the missing numbers.

a.	b.	c.	d.
$23 + 4 = \underline{\hspace{2cm}}$	$25 - 3 = \underline{\hspace{2cm}}$	$52 + 7 = \underline{\hspace{2cm}}$	$89 - 1 = \underline{\hspace{2cm}}$
$31 + 8 = \underline{\hspace{2cm}}$	$38 - 5 = \underline{\hspace{2cm}}$	$35 + 3 = \underline{\hspace{2cm}}$	$68 - 2 = \underline{\hspace{2cm}}$
$3 + 22 = \underline{\hspace{2cm}}$	$29 - 4 = \underline{\hspace{2cm}}$	$26 + 2 = \underline{\hspace{2cm}}$	$47 - 3 = \underline{\hspace{2cm}}$

2. Draw the hour and minute hands.

 a. half past one	 b. half past five	 c. half past ten
--	---	--

3. Draw three dots. Then join them with straight lines. Use a ruler.

What shape did you get?

4. Solve.

a. Ben drew a line 27 cm long. Then he erased 6 cm of the line.
Now how long is the line?

b. Amanda had a string 11 cm long. She found another string 9 cm long.
What is the length of the two strings together?

5. First subtract enough to leave 10. Then subtract the rest.

a. $15 - 7$ $\begin{array}{r} - \\ / \backslash \end{array}$ $15 - \underline{\quad\quad} - \underline{\quad\quad}$ $= \underline{\quad\quad}$	b. $14 - 9$ $\begin{array}{r} - \\ / \backslash \end{array}$ $14 - \underline{\quad\quad} - \underline{\quad\quad}$ $= \underline{\quad\quad}$	c. $16 - 8$ $\begin{array}{r} - \\ / \backslash \end{array}$ $16 - \underline{\quad\quad} - \underline{\quad\quad}$ $= \underline{\quad\quad}$
--	--	--

6. Add.

a. $\begin{array}{r} 25 \\ 12 \\ + 30 \\ \hline \end{array}$	b. $\begin{array}{r} 21 \\ 14 \\ + 34 \\ \hline \end{array}$	c. $\begin{array}{r} 22 \\ 40 \\ + 15 \\ \hline \end{array}$	d. $\begin{array}{r} 33 \\ 11 \\ + 44 \\ \hline \end{array}$
---	---	---	---

7. Draw circles with “5”, “10”, “20,” and “50” to make these amounts of money.
Use the smallest possible number of coins.

a. 35c	b. 15c	c. 70c
d. 80c	e. 95c	f. 45c

8. You bought an item. How much money do you have left?

a. You had:  You bought a bar of soap for 60c. How much is left? _____c	b. You had:  You bought a toy for 85c. How much is left? _____c
---	--