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Introduction

Math Mammoth Add & Subtract 2-A deals with various addition and subtraction topics and word problems in the 2nd grade level, especially focusing on the basic addition and subtraction facts of single-digit numbers with an answer between 10 and 18.

The goal is to memorize the facts, or at least become so fluent with them that an outsider cannot tell if the child remembers the answer or uses some mental math strategy to get the answer.

Some children will accomplish this quicker and need less practice, whereas others will take longer. Thus, don't assign all the exercises in the book by default. Use your judgment, and try to match the amount of exercises to your child's need. The ones that don't get assigned can be used later for review. You can also use games to reinforce the facts, and in place of some of the exercises in the book (various games are provided later in this introduction).

Learning addition and subtraction facts is quite important for later study. For example, regrouping in addition and subtraction (carrying/borrowing) requires the ability to recall the basic facts efficiently and fluently.

The first few lessons in the book deal with some addition and subtraction strategies from first grade plus skip-counting in a 100-chart. The lesson *Fact Families* reviews the connection between addition and subtraction, and explains a strategy for missing subtrahend problems (such as $__ - 5 = 4$). In these problems, the child can *add* to find the missing total, which actually teaches them algebraic thinking.

Then we go on to ordinal numbers, which are probably familiar from everyday language. Even and odd numbers are presented in the context of equal sharing: if you can share that many objects evenly (equally), then the number is even. Use manipulatives here if desired.

There are two lessons on doubling and halving, which are important mental math skills. After that, we review how to complete the next whole ten. An example of this concept is the question: What number do you add to 23 to get 30? As an equation, we write: $23 + __ = 30$.

The next lesson goes a step further, as we study sums that go over ten, doing these sums in two parts. For example, in the sum $9 + 7$, the child first completes 10 by adding $9 + 1$. Then, the child adds the rest, or 6, to 10. Learning this prepares the child for addition facts where the sum is more than 10.

The next lessons, *Adding with 9*, *Adding with 8*, *Adding with 7*, and *Adding with 6*, provide lots of practice for learning and memorizing the basic addition facts. There are 20 such facts:

from $9 + 2$ till $9 + 9$: 8 facts
from $8 + 3$ till $8 + 8$: 6 facts
from $7 + 4$ till $7 + 7$: 4 facts
from $6 + 5$ till $6 + 6$: 2 facts

The last part of the book includes various lessons titled *Number Rainbows* and *Fact Families with....* These give lots of practice and reinforcement for the basic addition and subtraction facts, emphasizing the connection between addition and subtraction as a strategy for subtraction facts.

You can find videos that match these particular lessons at <https://www.mathmammoth.com/videos>. Choose 2nd grade, then the section for addition and subtraction facts.

I wish you success in teaching math!

Maria Miller, the author

Bingo

Simply click on the right answer in the grid, and it will be colored green. Once you get five in a row, a column, or diagonally, and bingo, you win! For this chapter, choose Addition (Single-Digit) or Subtraction (Under 20).

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

Fruity Math

Click the fruit with the correct answer and try to get as many points as you can within two minutes. The first link below is for addition facts, the second one for subtraction within 0-18.

https://www.mathmammoth.com/practice/fruity-math#op=addition&duration=120&mode=manual&config=2,9x1__3,9x1&max-sum=1000

https://www.mathmammoth.com/practice/fruity-math#op=subtraction&duration=30&mode=manual&config=11,18x1__2,9x1&allow-neg=0

Helpful Resources on the Internet

We have compiled a list of external Internet resources that match the topics in this book. This list of links includes web 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 at the list. Many of our customers love using these resources to supplement the bookwork. You can use the resources as you see fit for extra practice, to illustrate a concept better, and even just for some fun. Enjoy!

<https://l.mathmammoth.com/blue/addsubtract2a>



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

Review: Completing the Next Whole Ten

1. Write the previous and next **whole ten**. Then, circle the ten that is nearer the given number.

a. _____, 56, _____	b. _____, 72, _____	c. _____, 94, _____
d. _____, 37, _____	e. _____, 25, _____	f. _____, 31, _____

52 and how many more makes the next ten (60)? We can write $52 + \underline{\hspace{1cm}} = 60$.

You can solve it using a *helping* problem: 2 and how many more makes ten?

The answer to both problems is the same. It is 8.

2. Complete the next ten. Below, write a helping problem using numbers within 0-10.

a. $17 + \underline{\hspace{1cm}} = 20$ $7 + \underline{\hspace{1cm}} = 10$	b. $62 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ $2 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$	c. $94 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$ $4 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
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3. Complete the next ten. Think of the helping problem that uses numbers within 0-10.

a. $42 + \underline{\hspace{1cm}} = 50$	b. $34 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$	c. $66 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$
d. $61 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$	e. $97 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$	f. $83 + \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

4. Circle the even numbers. 8 9 12 15 10 19 11 6 17

5. Now pick the even numbers from the previous exercise, and write each of them as a double of some number.

a. _____ = _____ + _____	b. _____ = _____ + _____
c. _____ = _____ + _____	d. _____ = _____ + _____

6. Complete the next ten... and then go one more! Compare the two problems in each box.

a. $73 + \underline{\quad} = 80$ $73 + \underline{\quad} = 81$	b. $35 + \underline{\quad} = 40$ $35 + \underline{\quad} = 41$	c. $14 + \underline{\quad} = 20$ $14 + \underline{\quad} = 21$
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7. Find your way through the maze! Start at the top. You can only color a square if the sum is a whole ten (10, 20, 30, 40, 50, 60, 70, 80, 90, or 100).

$13 + 6$	$54 + 6$	$73 + 8$	$45 + 7$	$99 + 4$
$15 + 9$	$14 + 8$	$15 + 5$	$13 + 6$	$32 + 7$
$45 + 7$	$73 + 7$	$64 + 5$	$82 + 9$	$16 + 7$
$30 + 12$	$39 + 1$	$74 + 6$	$73 + 9$	$52 + 7$
$46 + 7$	$32 + 7$	$31 + 9$	$86 + 4$	$65 + 4$
$92 + 4$	$21 + 8$	$24 + 7$	$22 + 8$	$32 + 6$
$83 + 6$	$11 + 7$	$98 + 2$	$57 + 3$	$17 + 9$
$44 + 9$	$12 + 8$	$95 + 6$	$38 + 5$	$53 + 9$
$71 + 9$	$34 + 4$	$36 + 7$	$19 + 4$	$28 + 11$
$53 + 7$	$29 + 2$	$26 + 6$	$78 + 6$	$32 + 5$

8. Complete the next whole ten. These are more challenging.

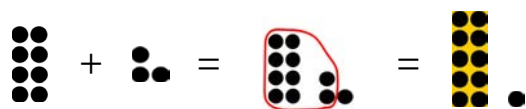
a. $17 + \underline{\quad} + 1 = 20$ $12 + \underline{\quad} + 4 = 20$ $13 + \underline{\quad} + 4 = 20$	b. $35 + \underline{\quad} + 2 = 40$ $32 + \underline{\quad} + 3 = 40$ $36 + \underline{\quad} + 3 = 40$	c. $41 + \underline{\quad} + 6 = 50$ $44 + \underline{\quad} + 3 = 50$ $42 + \underline{\quad} + 5 = 50$
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9. Find as many different sums as you can to make one hundred!

$90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$	$90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$	$90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$ $90 + \underline{\quad} + \underline{\quad} = 100$
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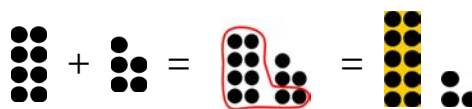
Adding with 8

Imagine that 8 wants to be a 10!
It takes two from the other number
(from 3). So, 8 becomes 10, and
only 1 is left over.



$$8 + 3 = 10 + 1 = 11$$

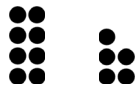
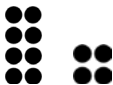
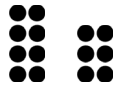
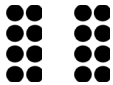
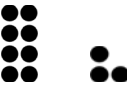
8 wants to be a 10! So, it takes
two from the other number
(from 5). So, 8 becomes 10,
and 3 are left over.



$$8 + 5 = 10 + 3 = 13$$

Use the list on the right to practice. Don't write the answers there.
Just point to different problems and say the answer aloud.

1. Add. First, circle the ten.

 a. $8 + 5$ $10 + 3 = \underline{\quad}$	 b. $8 + 4$ $10 + \underline{\quad} = \underline{\quad}$	 c. $8 + \underline{\quad}$ $10 + \underline{\quad} = \underline{\quad}$
 d. $8 + \underline{\quad} =$ $10 + \underline{\quad} = \underline{\quad}$	 e. $8 + \underline{\quad} =$ $10 + \underline{\quad} = \underline{\quad}$	 f. $8 + \underline{\quad} =$ $10 + \underline{\quad} = \underline{\quad}$

$8 + 1 = \square$

$8 + 2 = \square$

$8 + 3 = \square$

$8 + 4 = \square$

$8 + 5 = \square$

$8 + 6 = \square$

$8 + 7 = \square$

$8 + 8 = \square$

$8 + 9 = \square$

2. It is good to memorize the doubles, also. Fill in.

$2 + 2 = \underline{\quad}$	$5 + 5 = \underline{\quad}$	$8 + 8 = \underline{\quad}$
$3 + 3 = \underline{\quad}$	$6 + 6 = \underline{\quad}$	$9 + 9 = \underline{\quad}$
$4 + 4 = \underline{\quad}$	$7 + 7 = \underline{\quad}$	$10 + 10 = \underline{\quad}$

Number Rainbows—11 and 12

This is a number rainbow for 11. If two numbers are connected with an arc, they add up to 11. Use the number rainbow to help you with addition and subtraction facts!

1. Practice subtraction from 11. Don't write the answers; just think them in your head.



$11 - 6 = \square$

$11 - 7 = \square$

$11 - 8 = \square$

$11 - 2 = \square$

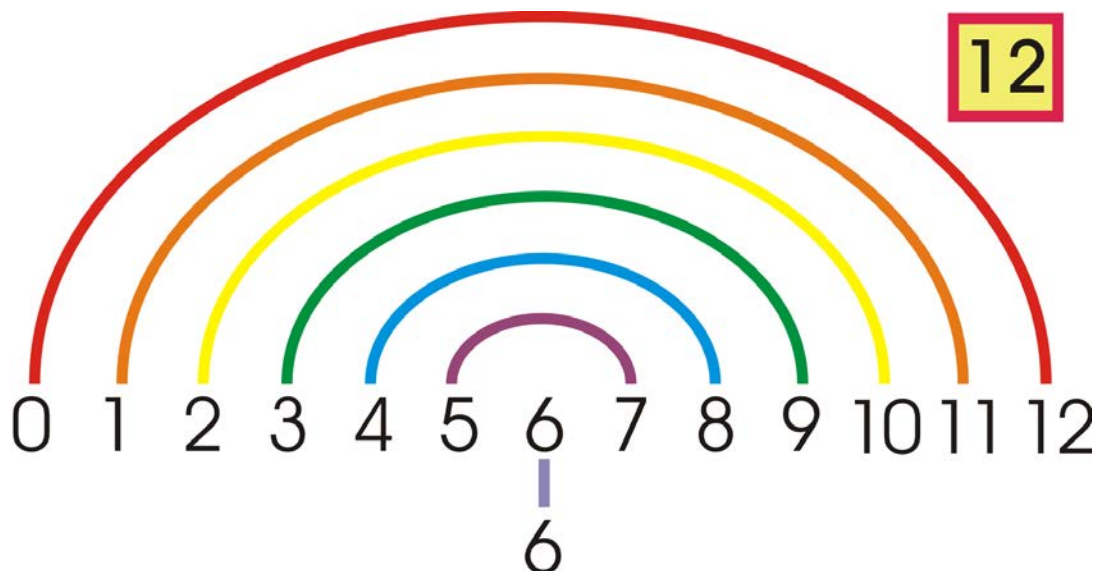
$11 - 3 = \square$

$11 - 9 = \square$

$11 - 4 = \square$

$11 - 5 = \square$

2. Similarly, practice subtraction from 12.



$12 - 5 = \square$

$12 - 7 = \square$

$12 - 10 = \square$

$12 - 6 = \square$

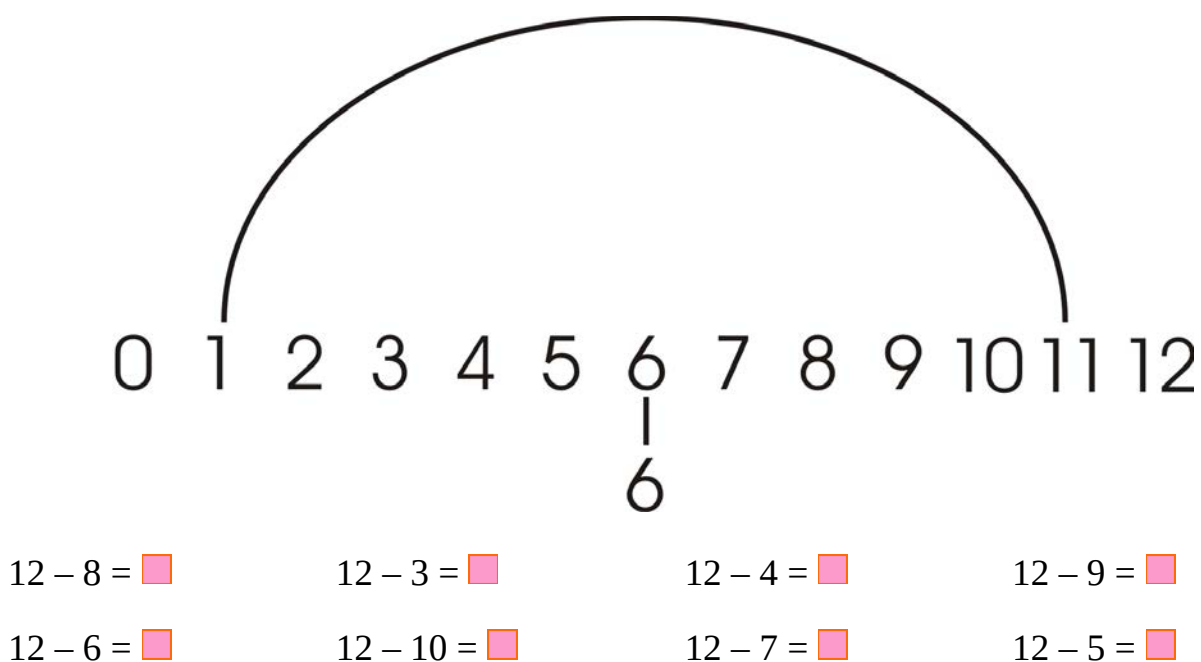
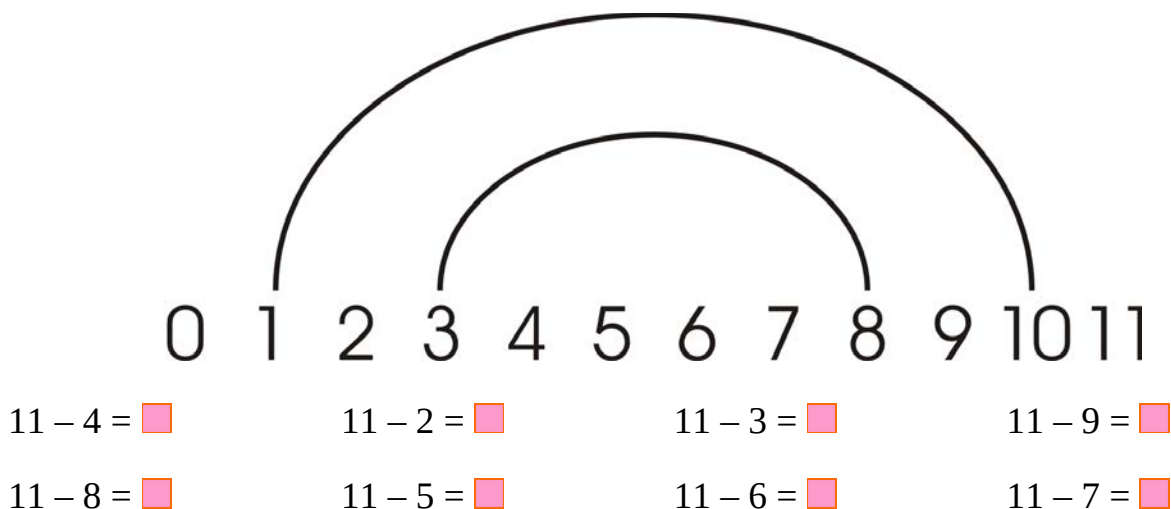
$12 - 9 = \square$

$12 - 4 = \square$

$12 - 3 = \square$

$12 - 8 = \square$

3. Fill and color the number rainbows. Don't look at the previous page!
Then practice the subtraction problems.



For more practice, make your own number rainbows and subtractions on blank paper!

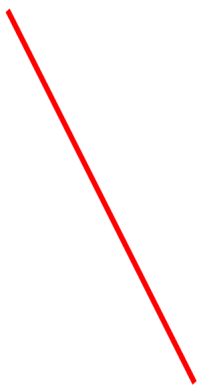
Sample worksheet from
<https://www.mathmammoth.com>

Fact Families - 13 and 14

1. Fill in. In each fact family, color the marbles so they match the numbers in it.

Fact families with 13		
10, 3, and 13 	$10 + 3 = \underline{\quad}$ $3 + 10 = \underline{\quad}$	$13 - 10 = \underline{\quad}$ $13 - 3 = \underline{\quad}$
9, <u> </u> , and 13 	$9 + \underline{\quad} = 13$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
8, <u> </u> , and 13 	$8 + \underline{\quad} = 13$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$
7, <u> </u> , and 13 	$7 + \underline{\quad} = 13$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$	$\underline{\quad} - \underline{\quad} = \underline{\quad}$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$

2. Connect with a line the problems that are from the same fact family. You don't need to write the answers.

$13 - 7 = \square$ $5 + \square = 12$ $11 - 3 = \square$ $8 + \square = 13$ $12 - 3 = \square$ $7 + \square = 11$		$11 - 4 = \square$ $11 - 8 = \square$ $5 + \square = 13$ $12 - 5 = \square$ $6 + \square = 13$ $9 + \square = 12$	$12 - 7 = \square$ $13 - 6 = \square$ $3 + \square = 12$ $13 - 5 = \square$ $3 + \square = 11$ $4 + \square = 11$
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More from math MAMMOTH



Math Mammoth has a variety of resources to fit your needs. All are available as economical downloads, and most also as printed copies.

- **Math Mammoth Light Blue Series**

A complete curriculum for grades 1-8. Each grade level includes two student worktexts (A and B), which contain all the instruction and exercises all in the same book, answer keys, chapter tests, end-of-year test, cumulative reviews, and a worksheet maker. International (all metric), Canadian, and South African versions are also available.

<https://www.MathMammoth.com/complete-curriculum>

<https://www.MathMammoth.com/international/international>

<https://www.MathMammoth.com/canada/>

https://www.MathMammoth.com/south_africa/

- **Math Mammoth Skills Review Workbooks**

These workbooks are intended to be used alongside the Light Blue series full curriculum, and they provide additional review to the topics studied in the main curriculum, in a spiral manner.

https://www.MathMammoth.com/skills_review_workbooks/

- **Math Mammoth Blue Series**

Blue Series books are topical worktexts for grades 1-8, containing both instruction and exercises. They cover all elementary math topics from 1st through 8th grade, from basic addition and multiplication to fractions, percentages, and equations. These books are not tied to grade levels, and are thus great for filling in gaps.

<https://www.MathMammoth.com/blue-series>

- **Make It Real Learning**

These activity workbooks concentrate on answering the question, "Where is math used in real life?" The series includes various workbooks for grades 3-12.

<https://www.MathMammoth.com/worksheets/mirl/>

- **Review Workbooks**

Workbooks for grades 1-8 that provide a comprehensive review of one grade level of math—for example, for review during school break or summer vacation.

https://www.MathMammoth.com/review_workbooks/

Free gift!

- Receive over 350 free sample pages and worksheets from my books, plus other freebies:

<https://www.MathMammoth.com/worksheets/free>

Lastly...

- Inspire4 is an inspirational website for the whole family I've been privileged to help with:

<https://www.inspire4.com>