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Introduction

Math Mammoth Add & Subtract 1 deals with two major topics: adding and subtracting within 0-20 and adding and subtracting two-digit numbers. These two major topics are blended together in a somewhat spiral manner. The subtopics include:

- Adding a two-digit number and a single-digit number without regrouping (carrying)
(for example, $23 + 4$ or $56 + 3$).
- Subtracting a one-digit number from a two-digit number without regrouping (borrowing):
For example, $45 - 3$ or $67 - 6$.
- Adding and subtracting two-digit numbers in columns (one number under the other) without regrouping.
- Recognizing that sometimes in adding two-digit numbers we need to regroup — to combine ten ones to make a new ten. In this grade level, we approach this concept mainly using visual models. Children are also welcome to use the 100-bead abacus to solve these problems. The standard algorithm where one number is written under the other will be studied in 2nd grade.
- Learning specific mental math strategies for adding and subtracting numbers under 20 (such as $7 + 9$ or $15 - 8$). We study a trick with nine and eight, adding just one more than a known sum, and using the relationship between addition and subtraction to subtract.

Please note that while several basic strategies are included for adding and subtracting within 0-20, the goal is not to memorize the basic addition where the sum is between 11 and 18, and the corresponding subtraction facts. That will happen in 2nd grade. Right now, the idea is to build the student's **number sense**: the ability to manipulate numbers by breaking them apart and composing them in different ways.

Also in second grade, your child or students will learn the traditional paper-and-pencil algorithms of adding and subtracting in columns. They will also learn more mental math. This means they will be able to fluently add and subtract numbers within 0-100. They will also learn to add and subtract three-digit numbers.

Good Mathematical Practices

- Mental math strategies allow your child or students to observe patterns inherent in our base-ten number system. For example, knowing that $8 + 7 = 15$ allows one to easily add $28 + 7$. Or, there is a similarity in the subtractions $10 - 4$, $50 - 4$, and $80 - 4$. This is what good number sense is all about: being able to recognize these patterns and structures, and to use them to do calculations in one's head.
- Several lessons in ask the child to write an equation (a calculation) for a situation in a word problem. This is the very beginning stage of modeling with mathematics: applying mathematics to solve problems arising in everyday life.

I wish you success in teaching math!

Maria Miller, the author

Games and Activities at Math Mammoth Practice

Hidden Picture Addition Game

Use a number range of 3 to 19, or some other, to practice addition.

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

Hidden Picture Subtraction Game

Choose a number range of 2 to 18, for example, to practice subtraction in this fun game.

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

Bingo

Choose Addition (Single-Digit).

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

Mathy's Berry Picking Adventure

Join Mathy (our mammoth mascot) on his berry-picking adventure, and practice your mental math! The link below gives you addition and subtraction problems within 0-20.

<https://www.mathmammoth.com/practice/mathy-berries#mode=addition-single&duration=2m>

Make Addition Sentences

You're given numbers (in flowers), and an answer to an addition. Drag two flowers to the empty slots so that the addition is true.

<https://www.mathmammoth.com/practice/number-sentences#questions=10&types=add-1-20>

Two-Digit Mental Addition - Online Practice

Practice adding one two-digit number and one single-digit number without regrouping in this online quiz.

<https://www.mathmammoth.com/practice/addition-subtraction-two-digit#opts=2p1dnr>

Two-Digit Mental Subtraction - Online Practice

Practice subtracting a single-digit number from a two-digit number without regrouping in this online quiz.

<https://www.mathmammoth.com/practice/addition-subtraction-two-digit#opts=2m1dnr>

Fruity Math

Click the fruit with the correct answer and try to get as many points as you can in the allotted time.

You could start with Level 1, in which case the game will automatically advance towards harder problems, or you could use the "Manual" setting to choose the exact types of numbers to add.

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

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!



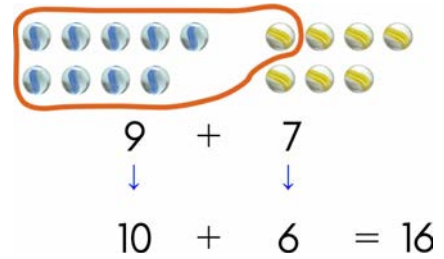
<https://l.mathmammoth.com/blue/addsubtract1>

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

A “Trick” with Nine

Imagine that nine wants to be ten! He is not happy—he wants to become a full TEN!
So, nine asks the other number (this time, seven) to give him one in order to make him a ten.

Seven says, “Okay,” gives one to nine, and has only six left for himself. In the end, we have 10 and 6. We get 16.



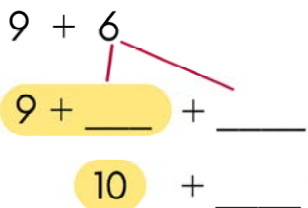
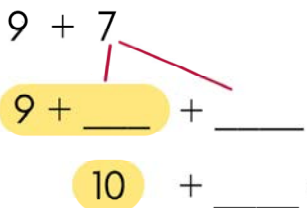
We can also show the same thing this way →

$$\begin{array}{r} 9 + 7 \\ \quad \swarrow \searrow \\ 9 + 1 + 6 \\ 10 + 6 = 16 \end{array}$$

1. Circle all of the blue marbles and enough of the yellow ones to make a ten. Add.

 a. $9 + 6$ $\downarrow \quad \downarrow$ $10 + \underline{5} = \underline{\quad}$	 b. $9 + 4$ $\downarrow \quad \downarrow$ $10 + \underline{\quad} = \underline{\quad}$
 c. $9 + 3$ $\downarrow \quad \downarrow$ $10 + \underline{\quad} = \underline{\quad}$	 d. $9 + 5$ $\downarrow \quad \downarrow$ $10 + \underline{\quad} = \underline{\quad}$

2. Fill in the blanks. Imagine that nine wants to become a ten.

 a. $9 + \underline{\quad} + \underline{\quad}$ $10 + \underline{\quad} = \underline{\quad}$	 b. $9 + \underline{\quad} + \underline{\quad}$ $10 + \underline{\quad} = \underline{\quad}$
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Completing the Next Ten

Review:

What numbers make 10?

You need to remember these well!

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

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

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

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

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

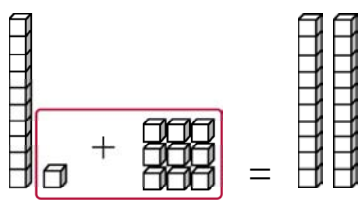
$6 + \underline{\quad} = 10$

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

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

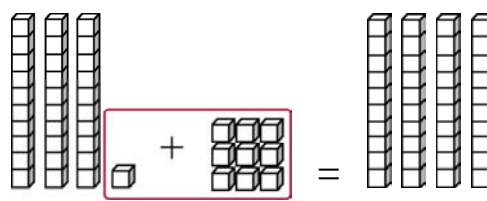
$2 + \underline{\quad} = 10$

Completing the ten



$11 + 9 = 20$

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

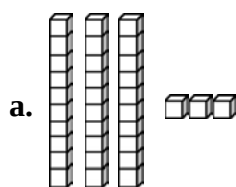


$31 + 9 = 40$

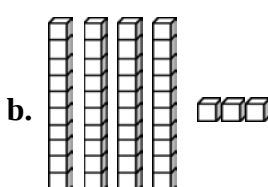
The 1 and the 9 single blocks make a *new* ten. We get a total of 40.

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

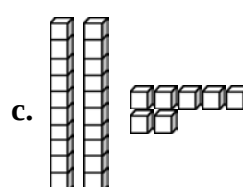
Write the addition that completes the next ten. You can also do these with an abacus.



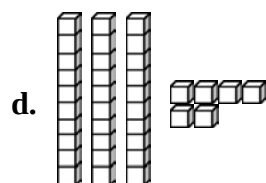
$33 + \underline{\quad} = \underline{40}$



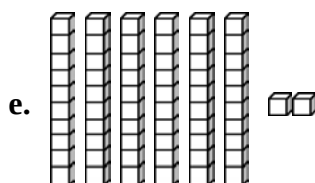
$43 + \underline{\quad} = \underline{\quad}$



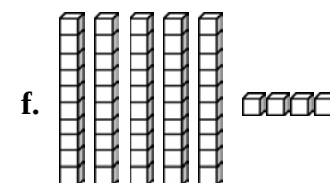
$27 + \underline{\quad} = \underline{\quad}$



$36 + \underline{\quad} = \underline{\quad}$



$62 + \underline{\quad} = \underline{\quad}$



$54 + \underline{\quad} = \underline{\quad}$

Using Addition to Subtract 1

From the picture on the right we can write two additions and two subtractions: a **fact family**.

There are TWO parts that make up the total, 6 and 5. In addition, we add the parts and get the total.

In subtraction, we start with the total and take away one of the parts. What is left? The other part.

Fact family with 6, 5, and 11:



$$6 + 5 = 11$$

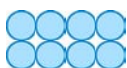
$$11 - 5 = 6$$

$$5 + 6 = 11$$

$$11 - 6 = 5$$

1. Write fact families.

a.



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

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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

b.



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

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

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

2. Calculate the total. Write two matching subtractions using the same numbers.

a. $8 + 4 = \underline{\quad}$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

b. $9 + 7 = \underline{\quad}$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

c. $7 + 6 = \underline{\quad}$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

3. For each subtraction write the matching addition.

a. $11 - 3 = \underline{\quad}$

$$3 + \underline{\quad} = 11$$

b. $11 - 4 = \underline{\quad}$

$$\underline{\quad} + \underline{\quad} = 11$$

c. $12 - 3 = \underline{\quad}$

$$\underline{\quad} + \underline{\quad} = 12$$

You can solve a subtraction problem like $15 - 9$ or $16 - 8$ **by addition**.

$15 - 9 = ?$

Think: $9 + \underline{\quad} = 15$

Or 9 and how many more is 15?

Guess and check!

Will $9 + 8$ work? Or $9 + 7$? Or $9 + 6$?

Or $9 + 5$? You can use the trick with nine!

$16 - 8 = ?$

Think: $8 + \underline{\quad} = 16$

Or 8 and what number makes 16?

Guess and check!

Will $8 + 5$ work? Or $8 + 6$? Or $8 + 7$?

4. Solve each subtraction by thinking about the matching addition.

a. $14 - 8 = \underline{\quad}$

($8 + \underline{\quad} = 14$)

b. $15 - 7 = \underline{\quad}$

($7 + \underline{\quad} = 15$)

c. $17 - 8 = \underline{\quad}$

($8 + \underline{\quad} = 17$)

d. $12 - 8 = \underline{\quad}$

($\underline{\quad} + \underline{\quad} = 12$)

e. $16 - 7 = \underline{\quad}$

($\underline{\quad} + \underline{\quad} = 16$)

f. $13 - 7 = \underline{\quad}$

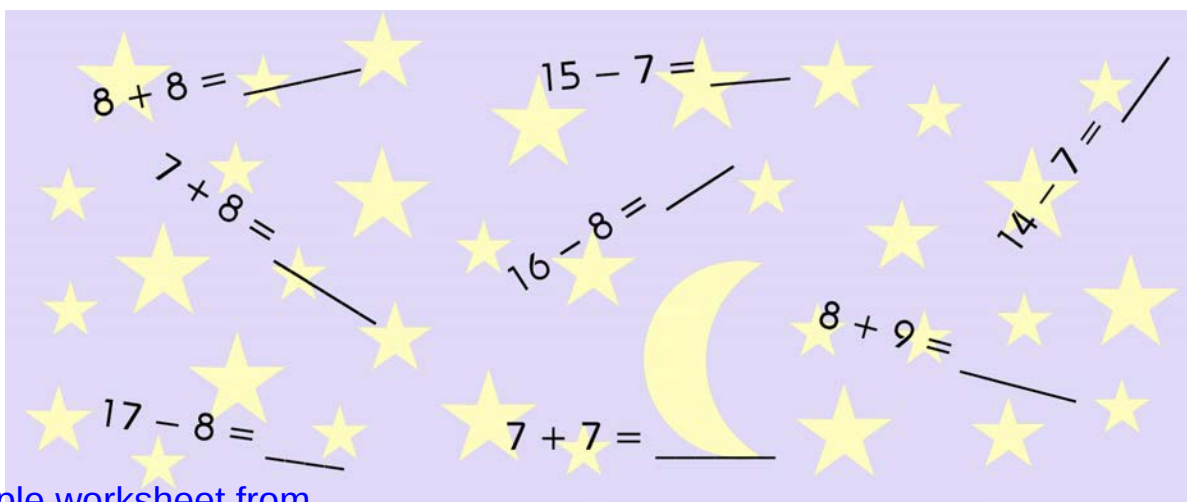
($\underline{\quad} + \underline{\quad} = 13$)

g. $13 - 8 = \underline{\quad}$

h. $11 - 7 = \underline{\quad}$

i. $14 - 9 = \underline{\quad}$

5. Doubles and doubles plus one more! Solve. Also, match each addition to the subtraction in the same fact family.



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>