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Introduction

Math Mammoth Subtraction 1 deals with the concept of subtraction, and addition and subtraction facts. Most of the problems use numbers that are 10 or less, but some include numbers between 10 and 20.

The concept of subtraction is easy to illustrate with the idea of 'taking away'. If your child does not yet know the minus symbol ' - ', it is a good idea to introduce it *first orally*, without any pencil and paper work.

In other words, use blocks, rocks, or other objects. Show the child eight blocks, and take away three blocks. Then use both kinds of wording: "*Eight blocks, take away three blocks, leaves five blocks. Eight blocks minus three blocks equals five blocks.*"

Play with the blocks or other concrete objects until the child can use the words MINUS and EQUALS in his/her own speech. This will make it much easier to introduce the actual written symbols afterwards.

The next step would be to abandon concrete objects and use semi-concrete illustrations or pictures. That is where this ebook starts. At this stage, the child can still figure out the subtraction problems by simply counting how many objects are left.

How does one then learn how to subtract without using concrete objects or pictures? How can the child subtract when she sees only numbers and there are no objects or pictures to count?

As a transitional strategy, you can teach the child to count down: to solve $9 - 5$ for example, the child counts down five steps from nine: eight, seven, six, five, four. So four is the answer.

But the final goal is to learn to use the addition facts to find the answer to subtraction - in essence, to memorize the basic subtraction facts, which are based on the addition facts. For this purpose, one must, of course, fully learn the connection between addition and subtraction.

Besides 'taking away', subtraction is also used for these two situations:

- Finding how much MORE something is as compared to something else. Note that no one "takes away" anything in this situation. It is about finding the *difference*.
- Two (or more) parts (of something) make up a whole. If you know the whole and one of its parts, you can figure out the other part.

In this ebook, we approach this as a missing addend problem. For example, if the whole is 10 and one part is 7, we know the parts add up to 10, so we can write $7 + \underline{\quad} = 10$. This CAN be solved by subtraction, or simply by one's knowledge of addition facts.

These two situations are taught explicitly and can be found in the word problems throughout the ebook.

The lessons named, **Addition and Subtraction Facts With ...**, aim at helping your child to memorize the basic facts. We are approaching it from the concept of 'fact families', and these should be memorized.

If your child already knows the basic addition facts with numbers 0 to 10, this shouldn't be difficult. This part of the book has a lot of repetition and practice of these addition facts.

Use your judgment as to whether your child will need all of the lessons; if he/she masters the basic facts quickly, you can just browse through the lessons fairly quickly or even skip some of them altogether.

Please keep in mind that this book might have more exercises than what your child or students need. Use your judgment to assign the problems.

I hope you find this book helpful in bringing enjoyment and success to your teaching of math!

Maria Miller, the author