Addition
Facts in Seven Days

by Dr. Carl H. Seltzer

+	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9	10
2	2	3	4	5	6	7	8	9	10	11
3	3	4	5	6	7	8	9	10	11	12
4	4	5	6	7	8	9	10	11	12	13
5	5	6	7	8	9	10	11	12	13	14
6	6	7	8	9	10	11	12	13	14	15
7	7	8	9	10	11	12	13	14	15	16
8	8	9	10	11	12	13	14	15	16	17
9	9	10	11	12	13	14	15	16	17	18

Day 2, Memorize:

$2 + 6 = 8$

$4 + 4 = 8$

$3 + 6 = 9$

$3 + 5 = 8$

$2 + 7 = 9$

$4 + 5 = 9$

Send ***Letter B*** home to parents and review Day 1.

2. $2 + 3 =$ ☐

3. $2 + 4 =$ ☐

4. $2 + 5 =$ ☐

5. $3 + 3 =$ ☐

6. $3 + 4 =$ ☐

7. $2 + 6 =$ ☐

8. $3 + 5 =$ ☐

9. $4 + 4 =$ ☐

10. $2 + 7 =$ ☐

11. $3 + 6 =$ ☐

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Addition Facts in Seven Days

Foreword

Students need certain facts at their disposal when doing mathematics, such as the addition facts to 20 and multiplication facts. Research shows that children's instant recall of these basic number facts will only progress from short-term memory (easily forgotten) to the long-term memory through constant practice and reinforcement.

Addition Facts in Seven Days offers an easy-to-follow systematic program to promote the learning of these essential number facts. Easily incorporated into any weekly program, teachers introduce the facts, which are then reinforced at home. Letters to parents are included in the book, which clearly state the facts to be practiced that day.

Strategies are included to help reduce the number of facts to be learned. Students will be happy to know that only thirty-six facts need to be memorized to master addition!

Addition Facts in Seven Days is an ideal mathematics support program, which allows students to achieve instant recall and understanding of number facts. Students will enjoy challenging both themselves and each other, as they work towards learning the set of number facts for each day.

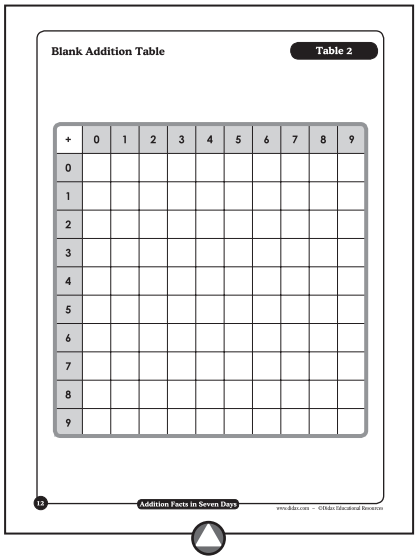
Contents

Teacher Notes

In This Book

This book includes teacher notes, activity sheets, letters to parents and assessment tasks.

Addition Facts in Seven Days


Blank Addition Table — Table 2

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

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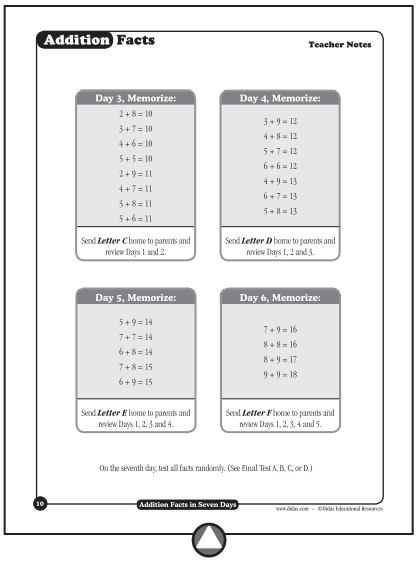
Students are introduced to the facts by completing a blank addition table. Patterns and families are discussed.


Addition Facts — Teacher Notes

Day 3, Memorize:
2 + 8 = 10
3 + 7 = 10
4 + 6 = 10
5 + 5 = 10
2 + 9 = 11
4 + 7 = 11
3 + 8 = 11
5 + 6 = 11
Send *Letter C* home to parents and review Days 1 and 2.

Day 4, Memorize:
3 + 9 = 12
4 + 8 = 12
5 + 7 = 12
6 + 6 = 12
4 + 9 = 13
6 + 7 = 13
5 + 8 = 13
Send *Letter D* home to parents and review Days 1, 2 and 3.

Day 5, Memorize:
5 + 9 = 14
7 + 7 = 14
6 + 8 = 14
7 + 8 = 15
6 + 9 = 15
Send *Letter E* home to parents and review Days 1, 2, 3 and 4.

Day 6, Memorize:
7 + 9 = 16
8 + 8 = 16
8 + 9 = 17
9 + 9 = 18
Send *Letter F* home to parents and review Days 1, 2, 3, 4 and 5.

On the seventh day, test all facts randomly. (See Final Test A, B, C, or D.)

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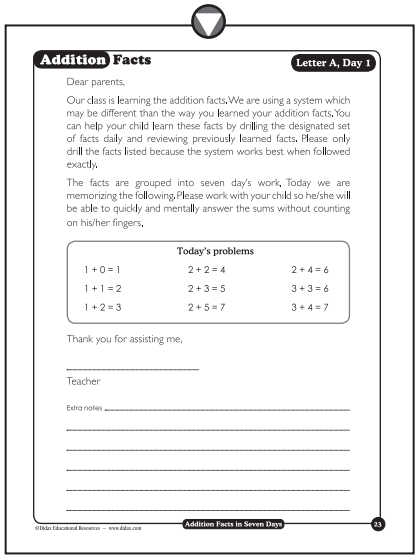
Teacher notes clearly state the facts to be introduced and learned each day.

A corresponding letter is sent home with the students. Parents are involved in the practice and reinforcement stage of the program.


Addition Facts — Letter A, Day 1

Dear parents,

Our class is learning the addition facts. We are using a system which may be different than the way you learned your addition facts. You can help your child learn these facts by drilling the designated set of facts daily and reviewing previously learned facts. Please only drill the facts listed because the system works best when followed exactly.

The facts are grouped into seven day's work. Today we are memorizing the following. Please work with your child so he/she will be able to quickly and mentally answer the sums without counting on his/her fingers.

Today's problems

1 + 0 = 1	2 + 2 = 4	2 + 4 = 6
1 + 1 = 2	2 + 3 = 5	3 + 3 = 6
1 + 2 = 3	2 + 5 = 7	3 + 4 = 7

Thank you for assisting me,

_____

Teacher

Extra notes _____

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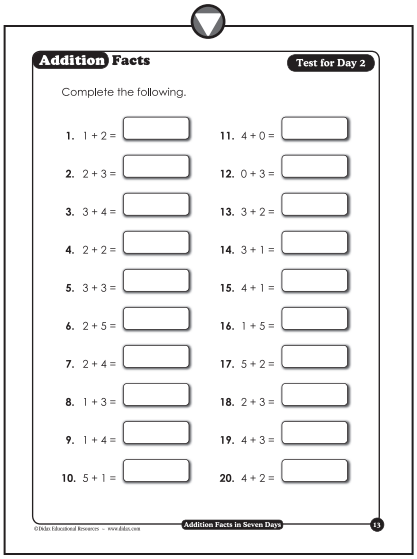
Students are tested the following day on newly learned facts. Previously learned facts are also included and reviewed in the test.


Addition Facts — Test for Day 2

Complete the following.

1. 1 + 2 = _____
2. 2 + 3 = _____
3. 3 + 4 = _____
4. 2 + 2 = _____
5. 3 + 3 = _____
6. 2 + 5 = _____
7. 2 + 4 = _____
8. 1 + 3 = _____
9. 1 + 4 = _____
10. 5 + 1 = _____
11. 4 + 0 = _____
12. 0 + 3 = _____
13. 3 + 2 = _____
14. 3 + 1 = _____
15. 4 + 1 = _____
16. 1 + 5 = _____
17. 5 + 2 = _____
18. 2 + 3 = _____
19. 4 + 3 = _____
20. 4 + 2 = _____

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One of the most important skills students need is a mastery of the basic computational skills.

All people require the ability to mentally compute basic addition and multiplication facts quickly and accurately. It is also very important for students to understand all they can about addition and multiplication and how they relate. Students should use manipulatives to help them reinforce their understanding of the concepts.

This book does not purposely mean to address the use of manipulatives, but students need to experience the concepts involved prior to memorizing facts.

Firstly, I would like to distinguish between a fact and an algorithm.

*A **fact** is a piece of information that is accepted as true. In mathematics there are many facts that students are required to learn. Hopefully they will already have some understanding of the facts and what they mean. In mathematics, facts are usually memorized. Some examples of math facts are addition facts, multiplication facts and definitions.*

*An **algorithm** is a systematic method to solve a problem … a rule. While algorithms use facts, there is a difference between the two.*

Let us look at some examples:

Facts: $2 + 3 = 5$, $4 + 8 = 12$, etc.

Problem:
$$\begin{array}{r} 24 \\ +\ 38 \\ \hline \end{array}$$

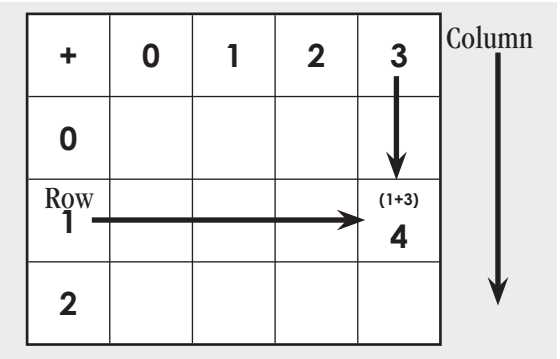
Students are taught to solve this problem by adding $8 + 4 = 12$ (a fact). Then, to add $2 + 3$ (really $20 + 30$) and get 5 (really 50). $2 + 3 = 5$ is a fact. Then $12 + 50 = 2 + 0$ (a fact) and $1 + 5 = 6$ (a fact), to get 62.

It is also a fact that 12 is equal to $10 + 2$ and 50 is equal to $5(10) + 0$. But the procedure used in solving this problem is the algorithm. One can see from this example that all addition facts and all multiplication facts are single digits less than ten.

$9 \times 12 = 108$ is an algorithm involving the facts 9×2 and 9×1 (the 1 being in 10s place), yielding $18 + 90 = 108$.

Therefore, it is never necessary to memorize 12×13, etc., because this product is produced by an algorithm.

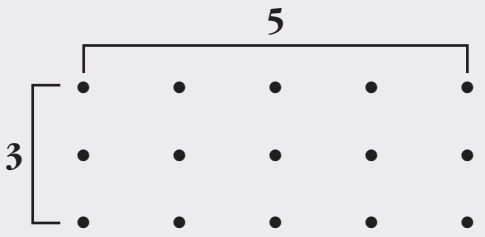
It is helpful for students to complete a blank addition or mulitplication table themselves, providing them with a better understanding of how to read these tables.



Students can use any method they wish to complete the table, but you may need to point out that where a column and a row intersect is where the sum or product is placed.

Younger students may use manipulatives such as Unifix® cubes, or counting on their fingers to find the sums.

Older students may also use manipulatives or arrays to find sums or products. For example, an array of dots that is 3×5 would contain 15 dots.



$3 \times 5 = 15$

Addition Facts

Test for Day 2

Complete the following.

1. 1 + 2 = ____

2. 2 + 3 = ____

3. 3 + 4 = ____

4. 2 + 2 = ____

5. 3 + 3 = ____

6. 2 + 5 = ____

7. 2 + 4 = ____

8. 1 + 3 = ____

9. 1 + 4 = ____

10. 5 + 1 = ____

11. 4 + 0 = ____

12. 0 + 3 = ____

13. 3 + 2 = ____

14. 3 + 1 = ____

15. 4 + 1 = ____

16. 1 + 5 = ____

17. 5 + 2 = ____

18. 2 + 3 = ____

19. 4 + 3 = ____

20. 4 + 2 = ____

Addition Facts

Test for Day 3

Complete the following.

1.	4 + 5 =	**13.**	5 + 4 =
2.	2 + 2 =	**14.**	3 + 6 =
3.	2 + 5 =	**15.**	6 + 1 =
4.	2 + 7 =	**16.**	7 + 2 =
5.	2 + 3 =	**17.**	8 + 0 =
6.	1 + 8 =	**18.**	4 + 4 =
7.	3 + 5 =	**19.**	3 + 3 =
8.	3 + 6 =	**20.**	6 + 3 =
9.	2 + 4 =	**21.**	2 + 6 =
10.	5 + 3 =	**22.**	4 + 5 =
11.	7 + 2 =	**23.**	2 + 3 =
12.	6 + 2 =	**24.**	2 + 7 =