

A PRIMARY ARITHMETIC WORKBOOK



A Primary Arithmetic is a math book published in the 1880's and was authored by *Edward Olney*. After looking at a lot of public domain math books, I liked the set up of this one.

My daughter wanting a 'math book' like her cousins, I set out to turn this into one. ☺ This book is the result. My hope in sharing it with others is that it will be useful in some way to other homeschoolers.

Part I consists of Numbers, Addition, Subtraction, Multiplication, Division, and Fractions. It is designed for First and Second Grades (years)

Part II consists of a condensed course for practical life, including barter, and "casting interest." It is designed for Third and Fourth grades.

Enjoy,

Cynthia

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A PRIMARY ARITHMETIC WORKBOOK PART I.

THE FUNDAMENTAL COMBINATION OF THE
DIGITS, AND A PRIMARY COURSE IN COMMON
FRACTIONS AND DENOMINATE NUMBERS.

FOR FIRST AND SECOND GRADES (YEARS).

"This part is designed to give the pupil at the end of his second year, *i.e.*, BY THE TIME HE IS ABLE TO READ, a good intelligent knowledge of the Addition, Subtraction, Multiplication, and Division Tables; a knowledge of the nature of Common Fractions, and of the Common Denominations of Denominate Numbers."

Addition

Section I

Addition

Addition

Lesson I

Purpose: To learn how to find out the sum of any two numbers between one and nine.



Seat Exercise.

1. How many birds are on the box?
2. How many birds are in the tree?
3. How many birds in all?
4. How many birds are four birds and three birds?
5. How many birds are on the barn?
6. How many birds are flying to the barn?
7. How many birds in all?
8. How many birds are five birds and three birds?



Addition

9. How many cats are on the table?

10. How many cats are on the floor by the table?

11. How many cats in all?

12. How many cats are three cats and three cats?



13. How many boys are at play under the tree?

14. How many girls are at play under the tree?

15. How many boys and girls are in all?

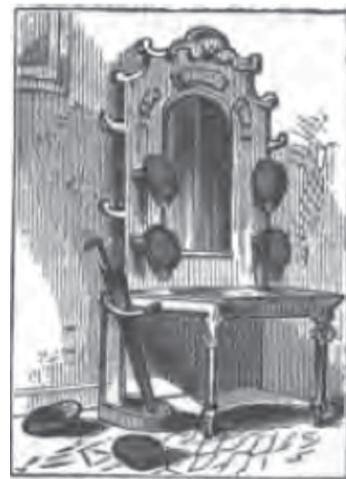
16. How many are 2 boys and 3 girls?

17. How many caps are hung up?

18. How many caps are on the floor?

19. How many caps are there in all?

20. How many caps are 4 caps and 2 caps?



Addition

Seat Exercise.

1. How many are 4 and 3?
2. How many are 3 and 6?
3. How many are 2 and 4?
4. How many are 5 and 1?
5. How many are 4 and 1?
6. How many are 3 and 1?
7. How many are 2 and 7?
8. How many are 6 and 8?
9. How many are 7 and 6?
10. How many are 8 and 5?
11. How many are 6 and 1?
12. How many are 9 and 2?
13. How many are 8 and 3?
14. How many are 7 and 9?
15. How many are 6 and 7?
16. How many are 7 and 8?

Number Reference

0	Zero
1	One
2	Two
3	Three
4	Four
5	Five
6	Six
7	Seven
8	Eight
9	Nine
10	Ten

Addition



Seat Exercise.

1. How many are 5 and 9?
2. How many are 6 and 1?
3. How many are 7 and 4?
4. How many are 4 and 9?
5. How many are 5 and 2?
6. How many are 8 and 9?
7. How many are 3 and 7?
8. How many are 2 and 9?
9. How many are 1 and 1?
10. How many are 2 and 1?
11. How many are 5 and 6?
12. How many are 8 and 7?
13. How many are 3 and 9?
14. How many are 1 and 8?

Seat Exercise.

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

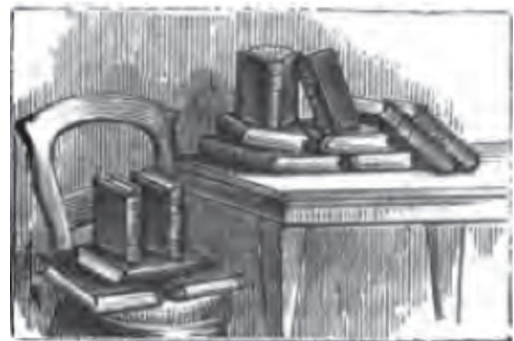
Addition

$1+1=$ $2+1=$ $3+1=$ $4+1=$ $5+1=$ $6+1=$ $7+1=$ $8+1=$ $9+1=$	$1+2=$ $2+2=$ $3+2=$ $4+2=$ $5+2=$ $6+2=$ $7+2=$ $8+2=$ $9+2=$	$1+3=$ $2+3=$ $3+3=$ _____ _____ _____ _____ _____ _____	$1+4=$ $2+4=$ $3+4=$ 4 5 6 7 8 9
$1+5=$ $2+5=$ 3 _____ _____ _____ _____ _____ _____	$1+6=$ $2+6=$ _____ _____ _____ _____ _____ _____	$1+7=$ _____ _____ _____ _____ _____ _____ _____	$1+8=$ _____ _____ _____ _____ _____ _____ _____
$1+9=$ _____ _____ _____ _____ _____ _____ _____	<h2>Addition Table</h2> <p><i>To make, and thoroughly to memorize this table is a great achievement.</i></p> <p><i>Mommy and Daddy will be very proud of you for studying it and committing it to memory!!</i></p>		

Addition

Seat Exercise.

1. A boy has three apples and a girl gives him five more. How many has he then?
2. Frank has 2 tops and George has 3. How many have they both?
3. There are 3 birds on one tree and 8 birds on another. How many birds are there on both trees?
4. Ann has seven flowers and George gives her six more. How many has she then?
5. There are 5 books on the chair and 8 on the table. How many books are there in all?



Addition

6. There are 4 chickens in the barn and 7 in the yard. How many chickens are there in all?

7. There are 5 eggs in one nest and 7 in the other. How many eggs in both nests?



8. If the black cat has four kittens and the white cat has six, how many kittens have both?

9. How many letters are there in the word *ground*? How many in the word *white*? How many in both words? How many are six and five?

10. How many letters are there in the word *teacher*? How many in the word *boy*? How many in both words? How many are 7 and 3?

Addition

Lesson II

Purpose: To fix the Addition Table in the memory, so you can tell the sum of any two numbers between 1 and 9 with readiness.

Seat Exercise.

$1+1=$

$2+1=$

$6+1=$

$1+ = 8$

$2+1=$

$1+2=$

$1+6=$

$1+ = 9$

$3+1=$

$3+1=$

$7+1=$

$1+ = 7$

$4+1=$

$1+3=$

$1+7=$

$1+ = 6$

$5+1=$

$4+1=$

$8+1=$

$1+ = 4$

$6+1=$

$1+4=$

$1+8=$

$1+ = 3$

$7+1=$

$5+1=$

$9+1=$

$1+ = 10$

$8+1=$

$6+1=$

$1+9=$

$1+ = 2$

$9+1=$

$1+0=$

$0+1=$

$1+ = 5$

1. George has three pigs and Frank has one pig. How many pigs have both?



2. Mary has 1 chicken and Jane has 7 chickens. How many chickens have both?

Addition

3. One and 3 are how many?

4. One and what make four?

5. Three and what make four?

6. Five and one are how many?

7. Five and what make six?

8. One and what make six?

9. Mary has 4 flowers. How many more must she get to have five?

10. George has 1 top. How many more must he get to have 4?

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

Addition

Seat Exercise.

	$1+2=$	$6+2=$	$2+ = 4$
$2+2=$	$2+1=$	$2+6=$	$2+ = 6$
$3+2=$	$2+2=$	$7+2=$	$2+ = 8$
$4+2=$	$3+2=$	$2+7=$	$2+ = 5$
$5+2=$	$2+3=$	$8+2=$	$2+ = 10$
$6+2=$	$4+2=$	$2+8=$	$2+ = 10$
$7+2=$	$2+4=$	$9+2=$	$2+ = 3$
$8+2=$	$5+2=$	$2+9=$	$2+ = 7$
$9+2=$	$2+5=$	$0+2=$	$2+ = 9$



1. Ann has 8 flowers and George has 2. How many have both? If Ann has 2 and George 8, how many have both?

2. Frank has 2 hens and George has 6. How many have both? If Frank has 6 and George 2, how many have both?

Addition

3. Two white pigs and four black pigs are how many?
Four white pigs and 2 black ones are how many?

4. Two and three are how many?

5. Two and what make five?

6. Three and what make five?

7. Eight and two make how many?

8. Eight and what make 10?

9. Two and what make 10?

10. There are 3 eggs in the nest. How many more must the hen lay to make 5?



11. If James has learned 6 words, how many more must he learn to know 8?

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

Addition

Seat Exercise.

	$1+3=$	$6+3=$	$3+ = 8$
	$3+1=$	$3+6=$	$3+ = 9$
$3+3=$	$2+3=$	$7+3=$	$3+ = 7$
$4+3=$	$3+2=$	$3+7=$	$3+ = 11$
$5+3=$	$3+3=$	$8+3=$	$3+ = 10$
$6+3=$	$4+3=$	$3+8=$	$3+ = 12$
$7+3=$	$3+4=$	$9+3=$	$3+ = 4$
$8+3=$	$5+3=$	$3+9=$	$3+ = 5$
$9+3=$	$3+5=$	$0+3=$	$3+ = 6$

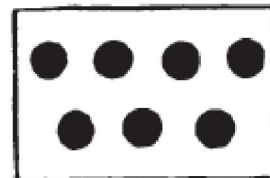
1. George has 7 books and Mary has 3. How many have both?



2. There are five lambs in one field and three in another. How many are there in both fields?

3. If there are 9 cows in one field and 3 cows in another, how many are there in both fields?

4. Eight eggs in the nest and three in your hand, make how many eggs?



5. Four and three are how many?

Addition

6. Three and what make seven?
7. Four and what make seven?
8. Five and four are how many?
9. Five and what make nine?
10. Four and what make nine?
11. Four and eight are how many?

Seat Exercise.

	$1+4=$	$6+4=$	$4+ = 6$
	$4+1=$	$4+6=$	$4+ = 7$
	$2+4=$	$7+4=$	$4+ = 9$
$4+4=$	$4+2=$	$4+7=$	$4+ = 12$
$5+4=$	$3+4=$	$8+4=$	$4+ = 5$
$6+4=$	$4+3=$	$4+8=$	$4+ = 10$
$7+4=$	$4+4=$	$9+4=$	$4+ = 8$
$8+4=$	$5+4=$	$4+9=$	$4+ = 13$
$9+4=$	$4+5=$	$0+4=$	$4+ = 11$

1. Four girls and five girls are how many girls?

Addition

2. Five boys and four boys are how many boys?

3. Nine pigs and four pigs are how many?

4. There are 7 sheep in one field and 4 in another. How many are there in both?

5. How many letters are there in the word George? How many in the word read? How many letters in both words?

6. George has 4 tops. How many more must he get to have 6? How many to have 9?

7. Mary has 3 flowers. How many more must she get to have 7?

8. Jane has 7 chickens. How many more must she get to have 11?

9. One day the hen's nest had 9 eggs in it. On another day it had 13. How many new eggs had been laid in it?

Addition

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

Seat Exercise.

	$1+5=$	$6+5=$	$6+ = 11$
	$5+1=$	$5+6=$	$2+ = 7$
	$2+5=$	$7+5=$	$8+ = 13$
	$5+2=$	$5+7=$	$4+ = 9$
$5+5=$	$3+5=$	$8+5=$	$1+ = 6$
$6+5=$	$5+3=$	$5+8=$	$5+ = 10$
$7+5=$	$4+5=$	$9+5=$	$3+ = 8$
$8+5=$	$5+4=$	$5+9=$	$7+ = 12$
$9+5=$	$5+5=$	$0+5=$	$9+ = 14$

1. Five and seven are how many?
2. Five and what make 12?
3. Seven and what make 12?
4. Nine and five are how many?
5. Eight and what make 13?
6. Five and what make 13?
7. Five and what make 14?
8. Five and what make 11?



Addition

9. Five and what make 10?

10. George has 6 nuts and John has 5. How many have both?

11. Mary has 7 flowers. How many more must she get to have 12?

12. Jane has learned five words. How many more must she learn to know 10?

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

Seat Exercise.

	$1+6=$	$5+6=$	$6+ = 9$
	$6+1=$	$6+5=$	$6+ = 12$
	$2+6=$	$7+6=$	$6+ = 11$
	$6+2=$	$6+7=$	$6+ = 7$
	$3+6=$	$8+6=$	$6+ = 10$
$6+6=$	$6+3=$	$6+8=$	$6+ = 8$
$7+6=$	$4+6=$	$9+6=$	$6+ = 15$
$8+6=$	$6+4=$	$6+9=$	$6+ = 13$
$9+6=$	$6+6=$	$0+6=$	$6+ = 14$

1. Six and eight are how many?

Addition

2. Six and what make 14?

3. Eight and what make 14?

4. Six and seven are how many?

5. Six and what make 13?

6. Seven and what make 13?

7. Six and nine are how many?

8. Six and what make 15?

9. Nine and what make 15?



10. If John gives Mary eight flowers, how many must James give her so that she will have 14?

Addition

11. John gave Mary seven flowers and James gave her six. How many did she then have?

12. If John finds 9 eggs, how many must George find to make 15?

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

Seat Exercise.

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

1. Eight and seven are how many?

2. Eight and what make 15?

3. Seven and what make 15?

4. Nine and seven are how many?

Addition

5. Nine and what make 16?

6. Seven and what make 16?

7. Seven and what make 14?

8. John has learned 7 words. How many more must he learn to know 14?

9. If Frank and Mary find 15 eggs, and Mary finds seven of them, how many does Frank find?

10. Peter and John have 16 apples, and Peter has 9 of them. How many has John?

Addition



Seat Exercise.

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

1. Eight and eight are how many?
2. Eight and what make 16?
3. Eight and nine are how many?
4. Eight and what make 17?

Addition

5. Nine and what make 17?

6. If there are eight girls and nine boys in the yard, how many are there in all?

7. If there are 17 children in the yard and eight of them are girls, how many are boys?

8. If there are 17 children in the yard and nine of them are boys, how many are girls?

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

Seat Exercise.

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

Addition

1. Nine and nine are how many?
2. Nine and what make 18?
3. How many nines make 18?
4. There are 8 red apples and 9 green apples in a dish. How many apples are there in the dish?
5. There are 17 apples in a dish. 9 of them are red and the others green. How many are green?

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

Purpose: To learn to recognize instantly the two parts which make each of the numbers from 2 to 10.

Example: $4+1=$
 $1+4=$
 $3+2=$
 $2+3=$ {5

Seat Exercise.

1. Write each two numbers which make 2.

Addition

2. Write each two numbers which make 3.

3. Write each two numbers which make 4. Each two which make 5. Each two which make 6; 7; 8; 9; 10.

4	6
5	7

Addition

8

9

10

Addition

Lesson III

Purpose: To learn how to add any number expressed by two figures, to any one expressed by one figure.

Example: 10 and 7 will be seventeen (17). 10 and 3 will be thirteen (13) etc.

Seat Exercise.

$10+1=$

$10+4=$

$10+ = 19$

$10+2=$

$10+9=$

$10+ = 15$

$10+3=$

$10+1=$

$10+ = 16$

$10+4=$

$10+3=$

$10+ = 17$

$10+5=$

$10+5=$

$10+ = 18$

$10+6=$

$10+2=$

$10+ = 12$

$10+7=$

$10+8=$

$10+ = 13$

$10+8=$

$10+6=$

$10+ = 14$

1. There were ten eggs in the nest, and the hen laid three more. How many were there then?

2. John has ten books and Frank gives him five. How many books has he then?



3. Mary has ten flowers. How many more must she pick to have 16?

Addition

4. There are 10 birds in the barn. How many more must come to make 18?

5. Ten and how many make 13?

6. Ten and how many make 17?

5 8 7 6 4 1 0 9 3 9
10 10 10 10 10 10 10 10 10 10

Seat Exercise.

20+3=	30+5=	40+2=	50+8=
20+6=	30+7=	40+0=	50+1=
20+5=	30+9=	40+9=	50+0=
20+8=	30+0=	40+7=	50+7=
20+1=	30+1=	40+1=	50+6=
20+4=	30+3=	40+3=	50+3=
20+2=	30+6=	40+5=	50+4=
20+9=	30+2=	40+8=	50+2=
20+7=	30+8=	40+6=	50+6=
20+0=	30+4=	40+4=	50+5=

1. James has found 20 eggs, and Frank has found 7 more than James. How many has Frank found?

Addition



2. There are thirty blackbirds in a tree, and on the ground seven more than in the tree. How many are there on the ground?

3. There are 50 birds on the ground under a tree and 9 more came. How many birds were there then?

4. Ann's father is 40 years old, and Mary's father is 6 years older. How old is Mary's father?

5. In Frank's garden are 40 flowers; but in George's garden there are 7 more than in Frank's. How many flowers are there in George's garden?

3 7 8 6 4 2 1 3 2 0
50 40 20 30 20 50 40 30 50 20

Addition

Seat Exercise.

$60+6=$

$70+5=$

$80+8=$

$90+2=$

$60+2=$

$70+2=$

$80+2=$

$90+0=$

$60+5=$

$70+1=$

$80+7=$

$90+1=$

$60+8=$

$70+7=$

$80+1=$

$90+7=$

$60+9=$

$70+8=$

$80+4=$

$90+9=$

$60+1=$

$70+4=$

$80+6=$

$90+3=$

$60+0=$

$70+3=$

$80+0=$

$90+5=$

$60+4=$

$70+0=$

$80+9=$

$90+6=$

$60+3=$

$70+6=$

$80+3=$

$90+4=$

$60+7=$

$70+9=$

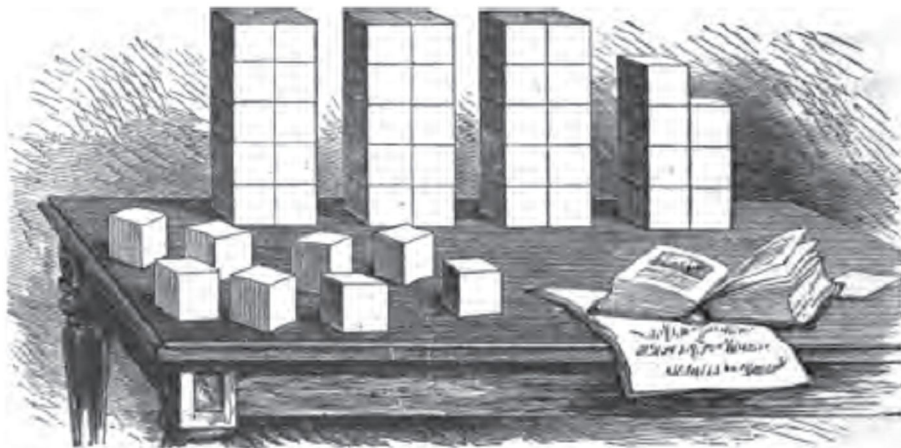
$80+5=$

$90+8=$

1. James has 80 nuts and finds 6 more. How many has he then?
2. If Mary has 70 flowers and Ann gives her 6 more, how many has she in all?
3. If George saw 90 birds and Frank saw 8 more than George did, how many did Frank see?
4. John has 10 cents and his father gives him 7 more. How many has he then?
5. James has 70 cents in a box and 5 cents in his hand. How many cents has he in all?

5 4 7 3 2 1 4 3 6 7 8
80 90 70 50 80 70 10 20 40 60 60

Addition



Purpose: To learn how to add any number represented by one digit to another represented by two digits, without counting.

- 8 First, remember 37 is 3 *tens* and 7.
37 Second, 8 and 7 are 15, which is 1 *ten* and 5.
 45 So we have 4 *tens* and 5, or 45.

Seat Exercise.

4 5 6 5 4 7 3 4 8 2
29 28 18 13 12 36 42 69 45 18

7 8 9 7 6 5 8 9 4 7
54 47 28 63 19 77 86 81 33 15

Purpose: To learn to recognize the sum of any digit added to any number represented by two digits, by remembering what digits when added give 0, 1, 2, 3, 4, 5, etc., in units place.

Method: Knowing that $9+1$, $8+2$, $6+4$, and $5+5$, each makes 10, you will be able to recognize the sum in such cases as the following:

1 2 3 etc.; 1 2 3 etc.;
19 18 17 29 28 27

Addition

So lets take 1 and 19. We know that 19 is 1 ten and 9. We also know that 1 and 9 are 10. So take the sum ten from the units place, or 1 ten and the 1 ten from 19. We now have 2 tens or 20.

Do the same with 1 and 29. Take the sum ten from the units place, or 1 ten and the 2 tens from the 29 and we have 3 tens or 30.

Seat Exercise.

On a separate piece of paper, write out each equation where the units place adds up to 0. Of these, there should be 81 in all.

Do the same for the units place adding up to 1. Of these combinations, there are 72 in all.

Continue with the units place adding up to 2, 3, 4, 5, 6, 7, 8, and 9.

Purpose: *This exercise is but a modified form of the preceding, and has the same end in view.*

Method: *Look at the numbers below and notice the digits in the units place. 4 and 3 make seven, therefore, 14 and 3 make seven-teen, 24 and 3 make twenty-seven, etc.; that is, that we have only to think what 4 and 3 make in any case.*

3	3	3	3	3	3	3	3	3	3	3
<u>4</u>	<u>14</u>	<u>24</u>	<u>34</u>	<u>44</u>	<u>54</u>	<u>64</u>	<u>74</u>	<u>84</u>	<u>94</u>	

Seat Exercise.

2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
<u>3</u>	<u>13</u>	<u>23</u>	<u>33</u>	<u>43</u>	<u>53</u>	<u>63</u>	<u>73</u>	<u>83</u>	<u>93</u>	<u>3</u>	<u>13</u>	<u>23</u>	<u>33</u>	<u>43</u>

Addition

3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
53 63 73 83 93 4 14 24 34 44 54 64 74 84 94

5 5 5 5 5 5 5 5 5 5 2 2 2 2 2
4 14 24 34 44 54 64 74 84 94 4 14 24 34 44

2 2 2 2 2 3 3 3 3 3 3 3 3 3 3
54 64 74 84 94 4 14 24 34 44 54 64 74 84 94

4 4 4 4 4 4 4 4 4 4 4 5 5 5 5
3 13 23 33 34 43 53 63 73 83 93 3 13 23 33

5 5 5 5 5 5 2 2 2 2 2 2 2 2 2
43 53 63 73 83 93 5 15 25 35 45 55 65 75 85

2 3 3 3 3 3 3 3 3 3 3 4 4 4 4
95 2 12 22 32 42 52 62 72 82 92 5 15 25 35

4 4 4 4 4 4 5 5 5 5 5 5 5 5 5
45 55 65 75 85 95 2 12 22 32 42 52 62 72 82

5 2 2 2 2 2 2 2 2 2 2 3 3 3 3
92 6 16 26 36 46 56 66 76 86 96 5 15 25 35

Addition

$$\begin{array}{r} 3 \quad 3 \quad 3 \quad 3 \quad 3 \quad 3 \quad 4 \quad 4 \quad 4 \quad 4 \quad 4 \quad 4 \quad 4 \quad 4 \quad 4 \\ \underline{45} \quad \underline{55} \quad \underline{65} \quad \underline{75} \quad \underline{85} \quad \underline{95} \quad \underline{2} \quad \underline{12} \quad \underline{22} \quad \underline{32} \quad \underline{42} \quad \underline{52} \quad \underline{62} \quad \underline{72} \quad \underline{82} \end{array}$$

$$\begin{array}{r} 4 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 3 \quad 3 \quad 3 \quad 3 \\ \underline{92} \quad \underline{7} \quad \underline{17} \quad \underline{27} \quad \underline{37} \quad \underline{47} \quad \underline{57} \quad \underline{67} \quad \underline{77} \quad \underline{87} \quad \underline{97} \quad \underline{6} \quad \underline{16} \quad \underline{26} \quad \underline{36} \end{array}$$

$$\begin{array}{r} 3 \quad 3 \quad 3 \quad 3 \quad 3 \quad 3 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \quad 2 \\ \underline{46} \quad \underline{56} \quad \underline{66} \quad \underline{76} \quad \underline{86} \quad \underline{96} \quad \underline{2} \quad \underline{12} \quad \underline{22} \quad \underline{32} \quad \underline{42} \quad \underline{52} \quad \underline{62} \quad \underline{72} \quad \underline{82} \end{array}$$

$$\begin{array}{r} 2 \\ \underline{92} \end{array}$$

Passing to the case in which the tens change. Remember that it will only change by one number. The important thing is to recognize the sum of two figures.

Seat Exercise.

$$\begin{array}{r} 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 5 \quad 8 \quad 8 \quad 8 \quad 8 \quad 8 \\ \underline{6} \quad \underline{16} \quad \underline{26} \quad \underline{36} \quad \underline{46} \quad \underline{56} \quad \underline{66} \quad \underline{76} \quad \underline{86} \quad \underline{96} \quad \underline{4} \quad \underline{14} \quad \underline{24} \quad \underline{34} \quad \underline{44} \end{array}$$

$$\begin{array}{r} 8 \quad 8 \quad 8 \quad 8 \quad 8 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \quad 7 \\ \underline{54} \quad \underline{64} \quad \underline{74} \quad \underline{84} \quad \underline{94} \quad \underline{6} \quad \underline{16} \quad \underline{26} \quad \underline{36} \quad \underline{46} \quad \underline{56} \quad \underline{66} \quad \underline{76} \quad \underline{86} \quad \underline{96} \end{array}$$

$$\begin{array}{r} 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 9 \quad 6 \quad 6 \quad 6 \quad 6 \quad 6 \\ \underline{2} \quad \underline{12} \quad \underline{22} \quad \underline{32} \quad \underline{42} \quad \underline{52} \quad \underline{62} \quad \underline{72} \quad \underline{82} \quad \underline{92} \quad \underline{6} \quad \underline{16} \quad \underline{26} \quad \underline{36} \quad \underline{46} \end{array}$$

Addition

4 4 4 4 4 2 2 2 2 2 2 2 2 2 2
59 69 79 89 99 9 19 29 39 49 59 69 79 89 99

3 3 3 3 3 3 3 3 3 3 6 6 6 6 6
7 17 27 37 47 57 67 77 87 97 8 18 28 38 48

6 6 6 6 6 9 9 9 9 9 9 9 9 9 9
58 68 78 88 98 4 14 24 34 44 54 64 74 84 94

4 4 4 4 4 4 4 4 4 4 3 3 3 3 3
6 16 26 36 46 56 66 76 86 96 8 18 28 38 48

3 3 3 3 3 7 7 7 7 7 7 7 7 7 7
58 68 78 88 98 3 13 23 33 43 53 63 73 83 93

5 5 5 5 5 5 5 5 5 5 9 9 9 9 9
8 18 28 38 48 58 68 78 88 98 6 16 26 36 46

9 9 9 9 9 6 6 6 6 6 6 6 6 6 6
56 66 76 86 96 4 14 24 34 44 54 64 74 84 94

5 5 5 5 5 5 5 5 5 5 3 3 3 3 3
9 19 29 39 49 59 69 79 89 99 9 19 29 39 49

Addition

3 3 3 3 3 9 9 9 9 9 9 9 9 9 9
59 69 79 89 99 5 15 25 35 45 55 65 75 85 95

6 6 6 6 6 6 6 6 6 6 6 4 4 4 4 4
7 17 27 37 47 57 67 77 87 97 8 18 28 38 48

4 4 4 4 4 9 9 9 9 9 9 9 9 9 9
58 68 78 88 98 1 11 21 31 41 51 61 71 81 91

6 6 6 6 6 6 6 6 6 6 6 8 8 8 8 8
5 15 25 35 45 55 65 75 85 95 9 19 29 39 49

8 8 8 8 8 9 9 9 9 9 9 9 9 9 9
59 69 79 89 99 7 17 27 37 47 57 67 77 87 97

7 7 7 7 7 7 7 7 7 7 7 9 9 9 9 9
4 14 24 34 44 54 64 74 84 94 8 18 28 38 48

9 9 9 9 9 8 8 8 8 8 8 8 8 8 8
58 68 78 88 98 2 12 22 32 42 52 62 72 82 92

7 7 7 7 7 7 7 7 7 7 7 8 8 8 8 8
5 15 25 35 45 55 65 75 85 95 7 17 27 37 47

Addition

8 8 8 8 8 7 7 7 7 7 7 7 7 7 7
57 67 77 87 97 9 19 29 39 49 59 69 79 89 99

8 8 8 8 8 8 8 8 8 8 8 9 9 9 9 9
8 18 28 38 48 58 68 78 88 98 9 19 29 39 49

9 9 9 9 9
59 69 79 89 99

Counting to 100

Practice counting to 100 by twos, as 2, 4, 6, 8, 10, etc., to 100. Then try it by beginning with one, counting on by twos, as 1, 3, 5, 7, 9, 11, etc., to 99.

When you have learned that, count by threes, first beginning with 3, then with 2, and then with 1. Thus you will count "3, 6, 9, 12, 15, etc., to 99;" or "2, 5, 8, 11, 14, etc., to 98;" or "1, 4, 7, 10, 13, 16, etc., to 100"

Again, count by fours, first beginning with 4, then with 3 then with 2, then with 1.

Again, count by fives, by sixes, etc., to nines, in each case starting with each lower number.

This is one of the most important exercises and one that will be kept up for days or weeks. Although we will proceed in the book, we will continue to practice these exercises.

For more practice, we will write them out too.

Addition

Seat Exercise.

1. How is Mary counting when she says, "3, 9, 15, 21, etc."? Count thus to 99.
2. How is one counting who says, "2, 10, 18, 26, etc."? Count thus to 98.
3. How is John counting when he says, "7, 16, 25, 34, etc."? Count thus to 97.
4. By what is James counting when he says, "5, 9, 13, 17, etc."? Count thus to 97.

Addition

Lesson IV

Purpose: To learn how to add any number of numbers expressed by one figure each, whose entire sum does not exceed one hundred.

First Exercise.



1. Here is an old barn, and in the yard are 4 hens with chickens. One hen has 5 chickens, another has 8, another has 6, and the other has 7. How many chickens are there in all? How many are $5 + 8 + 6 + 7$?

2. Mary has 4 flowers and Jane gives her 3 more. How many has she then? She then finds 2 more. How many has she then? When she brings them in, her mother gives her 1 more. How many has she in all? How many are $4 + 3 + 2 + 1$?

Addition

3. How many are 4 and 8? How many are 12 and 5? How many are 17 and 6? Then how many are $4 + 8 + 5 + 6$?

4. Here is a beautiful plant. On one stem there are 5 flowers, on another 7, on another 6, and on another 8. How many flowers are there in all? How many are 5 and 7? How many are 12 and 6? How many are 18 and 8? Thus, how many are $5 + 7 + 6 + 8$?



5. Eight apples in a dish, 4 on the table, 7 on the floor, and 9 in the chair, make how many apples?

$6 + 4 + 8 + 5 + 3 =$ how many?

$7 + 6 + 4 + 3 + 2 + 1 + 5 =$ how many?

5	6	7	8	9	6	5
4	2	3	2	8	4	4
3	3	1	6	7	3	3
2	1	4	4	6	2	8
<u>6</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>9</u>

Addition

Second Exercise.

1. Frank bought a top for 8 cents, some nuts for 5 cents, a kite for 9 cents, a hoop for 7 cents, and a little book for 6 cents. How many cents did he pay for all? $8 + 5 + 9 + 7 + 6 =$ how many?

2. Mary bought a doll for 54 cents, a little book for 8 cents, and a hoop for 7 cents. How many did she pay for all? $54 + 8 + 7 =$ how many?

3. George bought a sled for 85 cents, a rope for 8 cents, an apple for 1 cent, and some nuts for 3 cents. How much did he pay for all?

						4	6
		9	7	6	4	3	3
7	4	8	4	5	8	4	4
6	3	4	3	8	8	5	4
4	1	3	5	7	5	5	4
3	2	2	6	6	6	8	2
5	4	5	8	7	7	7	2
2	7	1	2	4	6	7	9
<u>8</u>	<u>6</u>	<u>4</u>	<u>1</u>	<u>9</u>	<u>7</u>	<u>2</u>	<u>8</u>

$3 + 4 + 5 + 8 + 7 + 5 + 4 + 9 =$ how many?

$5 + 8 + 2 + 1 + 1 + 3 + 3 + 4 =$ how many?

Addition

Lesson V

Definition Exercises.

Purpose: *To learn the Meaning of the words Number, Add, Addition, Sum, and Amount, so that you can understand them when used, and can use them.*

First Exercise.



1. What number of boys do you see in the picture? _____ What number of men? _____ What number of trees? _____
2. How many ducks do you see in the picture? _____ What number of barrels? _____
3. If you add the number of men in the picture to the number of boys, what number does it make? _____ If you add the number of barrels to the number of ducks, what is the sum? _____

Addition

4. If you add the number of trees, barrels, and ducks, what is the sum?

_____ What other word can you use for sum? _____

5. If you add the number of trees, men and boys, what is the sum?

6. What would be the sum if you add the number of boys and the number of

ducks? _____ What will be the sum if you add the number of

trees and ducks? _____ What will be the sum if you add the

number of boys and trees? _____

7. If you add the number of your eyes, the number of your hands, and the

number of your feet, what is the sum? _____

Second Exercise.

1. What is the sum of 5, 8, 4, 7, and 6?

2. What is the sum of 27 and 8?

3. What is the amount of 15, 4, and 7?

4. What is the amount of 7, 9, 8, and 4?

5. What is the sum of 63 and 5?

6. What is the amount of 81 and 9?

Addition

7. What do you call finding the sum of several numbers?

8. Add the numbers 8, 4, 7, 6, 5.

9. Add the numbers 10, 4, 8, 7, 9.

10. What number added to 5 makes 9?

11. What number added to 3 makes 7?

12. What number added to 7 makes 15?

13. What number added to 9 makes 13?

14. Find the sum of 8, 7, 6, 4, and 3.

15. Find the amount of 20, 6, 8, 4, and 2.

16. When you put several numbers together, what do you call the number which they make?



Subtraction

Section II

Subtraction

Subtraction

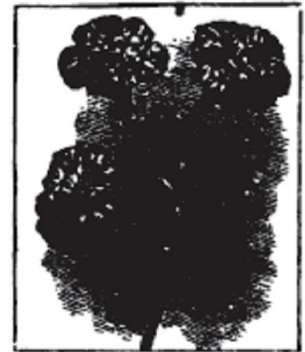
Purpose: To learn how to recognize the remainder when any number less than 10 is taken from any number which is composed of that number and any number less than 10.

Method: $9 - 4 = 5$: Consider what it takes (?) with the given number (4) to make the one from which it is to be taken (9). So if we take, $9 - 4 =$ what? We will ask ourselves '4 and what will make 9?' Going back to our addition, we know that 4 and 5 make 9, so the answer will be 5.

$$\begin{array}{l} 9 - 4 = 5 \quad 9 - 5 = 4 \\ 5 + 4 = 9 \quad 4 + 5 = 9 \end{array}$$

First Exercise.

1. There are 3 pinks on a stock. How many will be left if you pick one? The one picked and the 2 left are how many? 1 and what make 3? 1 from 3 leaves how many? 3 less 1 is how many?



2. If you were to pick two of the pinks, how many would be left? The 2 picked and the 1 left are how many? 2 and what make 3? 2 from 3 leaves how many? 3 less 2 is how many?



3. If you have 7 apples in two piles, and there are 3 in one pile, how many are there in the other? 3 and what make 7? 3 from 7 leaves how many?

Subtraction

4. If you take 4 apples from a pile of 7 apples, how many will be left? Why? (Because 4 and 3 make 7.) 7 less 4 is how many? 7 less 3 is how many?

5. Two and 5 make how many? 2 from 7 leaves how many? Why? 5 from 7 leaves how many? Why?

6. A boy has 6 cents in one pocket and 3 cents in the other. How many has he in all? What do 6 and 3 make? If the boy loses the 3 cents out of one pocket, how many has he left? How many had he at first? How many did he lose? How many has he left? 3 from 9 leaves how many? Why?

1 +	=	1	1 from 1	leaves how many?	1 - 1 =
1 +	=	2	1 from 2	leaves how many?	2 - 1 =
1 +	=	3	1 from 3	leaves how many?	3 - 1 =
1 +	=	4	1 from 4	leaves how many?	4 - 1 =
1 +	=	5	1 from 5	leaves how many?	5 - 1 =
1 +	=	6	1 from 6	leaves how many?	6 - 1 =
1 +	=	7	1 from 7	leaves how many?	7 - 1 =
1 +	=	8	1 from 8	leaves how many?	8 - 1 =
1 +	=	9	1 from 9	leaves how many?	9 - 1 =
1 +	=	10	1 from 10	leaves how many?	10 - 1 =

1	2	3	4	5	6	7	8	9	10	1	2
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>

Subtraction

7. Count backward from 10 to 0, by 1; thus, 10, 9, 8, etc. From 9 to 0. From 8 to 0. Complete the exercise below and also orally to your teacher.

10										
----	--	--	--	--	--	--	--	--	--	--

9									
---	--	--	--	--	--	--	--	--	--

8								
---	--	--	--	--	--	--	--	--

8. Count backward from 7 to 0, by 1; thus, 7, 6, 5, etc. From 6 to 0. From 5 to 0. From 4 to 0. From 3 to 0.

7							
---	--	--	--	--	--	--	--

6						
---	--	--	--	--	--	--

5					
---	--	--	--	--	--

4				
---	--	--	--	--

3			
---	--	--	--

Second Exercise.

1. There are 6 ducks in the pond. If 2 of them should come out, how many would remain? 2 and what are 6? 2 from 6 leaves how many? 6 less 2 is how many?



Subtraction

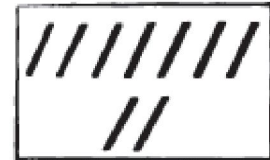
2. There are 5 eggs in the upper nest and 2 in the lower. How many more eggs are there in the upper than in the lower? 2 and how many more make 5? 2 from 5 leaves how many?



3. Mary has 7 cents and Frank has 2. How many more has Mary than Frank? 2 and how many more make 7? 2 from 7 leaves how many?

4. Henry is 2 years old. How many more years must he live to be 5 years old? 2 and how many make 5? 2 from 5 leaves how many?

5. Make 7 marks in a row. Then make two marks under them. How many marks have you in all? If you take away the 2 marks, how many of the 9 marks will remain? 2 from 9 leaves how many? 2 and how many make 9? $9 - 2$ is how many?



Subtraction

$2 +$	$=$	2	2 from 2 leaves how many?	$2 - 2 =$
$2 +$	$=$	3	2 from 3 leaves how many?	$3 - 2 =$
$2 +$	$=$	4	2 from 4 leaves how many?	$4 - 2 =$
$2 +$	$=$	5	2 from 5 leaves how many?	$5 - 2 =$
$2 +$	$=$	6	2 from 6 leaves how many?	$6 - 2 =$
$2 +$	$=$	7	2 from 7 leaves how many?	$7 - 2 =$
$2 +$	$=$	8	2 from 8 leaves how many?	$8 - 2 =$
$2 +$	$=$	9	2 from 9 leaves how many?	$9 - 2 =$
$2 +$	$=$	10	2 from 10 leaves how many?	$10 - 2 =$
$2 +$	$=$	11	2 from 11 leaves how many?	$11 - 2 =$

2	3	4	5	6	7	8	9	10	11	2	3
<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>0</u>

Drill Exercise: Count backward from 11 to 0, by 2; then from 10; then from 9, etc. Complete the exercise below and also orally to your teacher.

11					
----	--	--	--	--	--

10					
----	--	--	--	--	--

9				
---	--	--	--	--

8				
---	--	--	--	--

7			
---	--	--	--

6			
---	--	--	--

Subtraction

5		
---	--	--

4		
---	--	--

3	
---	--

Third Exercise.

1. Little May is but 3 years old, and her brother Frank is 7 years old. How many years older is Frank than May? 3 and how many make 7? 3 from 7 leaves how many?

2. Make 9 dots, putting 3 in a group and 6 in another. 3 and how many make 9? 3 from 9 leaves how many?



3. A man had lost 3 fingers from one hand. How many had he left on that hand, counting the thumb?

4. There are 8 books on the table. How many will be left when Frank has taken the 3 small ones away? 3 and what make 8? 3 from 8 leaves how many?



Subtraction

$3 + = 3$	3 from 3 leaves how many?	$3 - 3 =$
$3 + = 4$	3 from 4 leaves how many?	$4 - 3 =$
$3 + = 5$	3 from 5 leaves how many?	$5 - 3 =$
$3 + = 6$	3 from 6 leaves how many?	$6 - 3 =$
$3 + = 7$	3 from 7 leaves how many?	$7 - 3 =$
$3 + = 8$	3 from 8 leaves how many?	$8 - 3 =$
$3 + = 9$	3 from 9 leaves how many?	$9 - 3 =$
$3 + = 10$	3 from 10 leaves how many?	$10 - 3 =$
$3 + = 11$	3 from 11 leaves how many?	$11 - 3 =$
$3 + = 12$	3 from 12 leaves how many?	$12 - 3 =$

3	4	5	6	7	8	9	10	11	12	3	5
<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>3</u>	<u>0</u>	<u>0</u>

Drill Exercise: Count backward from 12 to 0, by 3; then from 11; then from 10, etc. Complete the exercise below and also orally to your teacher.

12					11				
10					9				
8					7				
6					5				
4					3				

Subtraction

Fourth Exercise.

1. John is now 10 years old, but he began going to school 4 years ago. How old was he when he began to go to school? 4 and what make 10? 4 from 10 leaves how many?



2. Little May is but 4 years old. How many years before she will be 11 years old? 4 and what make 11? 4 from 11 leaves how many?

3. Five tops and 4 tops are how many tops?

4. Nine tops are how many more than 5 tops?

5. Nine tops are how many more than 4 tops?

6. Mary has 13 cents and Carrie has 4. How many more has Mary than Carrie?

Subtraction

$$\begin{array}{r}
 4 + = 7 \\
 4 + = 10 \\
 4 + = 4 \\
 4 + = 13 \\
 4 + = 9 \\
 4 + = 11 \\
 4 + = 5 \\
 4 + = 8 \\
 4 + = 6 \\
 4 + = 12
 \end{array}$$

4 from 4 leaves how many?
 4 from 5 leaves how many?
 4 from 6 leaves how many?
 4 from 7 leaves how many?
 4 from 8 leaves how many?
 4 from 9 leaves how many?
 4 from 10 leaves how many?
 4 from 11 leaves how many?
 4 from 12 leaves how many?
 4 from 13 leaves how many?

$$\begin{array}{r}
 10 - 4 = \\
 8 - 4 = \\
 4 - 4 = \\
 6 - 4 = \\
 11 - 4 = \\
 9 - 4 = \\
 5 - 4 = \\
 7 - 4 = \\
 13 - 4 = \\
 12 - 4 =
 \end{array}$$

11	6	5	4	12	10	13	8	7	9	4	5
<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>0</u>

Drill Exercise: Count backward from 13 to 0, by 4; then from 12; then from 11, etc. Complete the exercise below and also orally to your teacher.

13			
----	--	--	--

12			
----	--	--	--

11		
----	--	--

10		
----	--	--

9		
---	--	--

8		
---	--	--

7	
---	--

6	
---	--

5	
---	--

4	
---	--

Subtraction

Fifth Exercise.

1. How many birds are in the tree? How many are flying to the tree? How many more are there in the tree than flying to it? If as many should fly off from the tree as are flying to it, how many would be left in the tree? 8 less 5 is how many? 8 is how many more than 5?



2. If you have 5 apples, how many more must you get to have 12? 12 is how many more than 5? 5 from 12 leaves how many?

3. How many days in one week? After 5 days of a week are gone, how many are left? $7 - 5 =$ how many?

$5 +$	$=$	8		5 from 5 leaves	how many?		$11 - 5 =$
$5 +$	$=$	6		5 from 6 leaves	how many?		$6 - 5 =$
$5 +$	$=$	11		5 from 7 leaves	how many?		$8 - 5 =$
$5 +$	$=$	9		5 from 8 leaves	how many?		$10 - 5 =$
$5 +$	$=$	5		5 from 9 leaves	how many?		$13 - 5 =$
$5 +$	$=$	7		5 from 10 leaves	how many?		$12 - 5 =$
$5 +$	$=$	12		5 from 11 leaves	how many?		$7 - 5 =$
$5 +$	$=$	14		5 from 12 leaves	how many?		$5 - 5 =$
$5 +$	$=$	10		5 from 13 leaves	how many?		$9 - 5 =$
$5 +$	$=$	13		5 from 14 leaves	how many?		$14 - 5 =$

12	8	7	10	5	9	6	11	13	14	5	6
<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>0</u>	<u>0</u>

Subtraction

Drill Exercise: Count backward from 14 to 0, by 5; then from 13; then from 12, etc. Complete the exercise below and also orally to your teacher.

14		
----	--	--

13		
----	--	--

12		
----	--	--

11		
----	--	--

10		
----	--	--

9	
---	--

8	
---	--

7	
---	--

6	
---	--

5	
---	--

Sixth Exercise.

1. If I buy a book for 6 cents, and hand the bookseller a dime (ten cents), how much change must he give me? 6 and what are 10? 6 from 10 leaves how many?



2. If I owe the postmaster 6 cents, and hand him 15 cents, how much change must he give me? 6 and what make 15? 6 from 15 leaves how many?

3. There were 15 peaches on the tree. How many are there now? Jane picked the others. How many did she pick?



Subtraction

4. There were 15 peaches on the tree, and Jane picked 6 of them. How many are left?

$$\begin{array}{r}
 6 + = 8 \\
 6 + = 6 \\
 6 + = 11 \\
 6 + = 9 \\
 6 + = 5 \\
 6 + = 7 \\
 6 + = 12 \\
 6 + = 14 \\
 6 + = 10 \\
 6 + = 13
 \end{array}$$

6 from 6 leaves how many?
 6 from 7 leaves how many?
 6 from 8 leaves how many?
 6 from 9 leaves how many?
 6 from 10 leaves how many?
 6 from 11 leaves how many?
 6 from 12 leaves how many?
 6 from 13 leaves how many?
 6 from 14 leaves how many?
 6 from 15 leaves how many?

$$\begin{array}{r}
 6 - 6 = \\
 10 - 6 = \\
 15 - 6 = \\
 13 - 6 = \\
 12 - 6 = \\
 8 - 6 = \\
 9 - 6 = \\
 7 - 6 = \\
 11 - 6 = \\
 14 - 6 =
 \end{array}$$

12	6	8	7	11	13	15	14	9	10	6	3
<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>0</u>	<u>0</u>

Drill Exercise: Count backward from 15 to 0, by 6; then from 14; then from 13, etc. Complete the exercise below and also orally to your teacher.

15		
----	--	--

14		
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13		
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Subtraction

Seventh Exercise.

1. John had 11 cents, and bought a slate for 7 cents. How many cents did he have left? 7 and what make 11? 7 from 11 leaves how many?
2. Frank has 7 cents. How many more must he earn to have 13 cents?
3. Mary has 15 flowers and her brother Henry has 7. How many more has Mary than Henry?
4. From a flock of 12 chickens a fox caught 7. How many were left?
5. Frank had a ball worth 16 cents, and James had a top worth 7 cents. How much more is the ball worth than the top? If they trade, how many cents ought James to give to Frank besides giving him his top?
6. If a spool of thread is worth 7 cents, and I hand the merchant 10 cents for one, how much change must he give me?

$7 + = 9$	7 from 7 leaves how many?	$7 - 7 =$
$7 + = 15$	7 from 8 leaves how many?	$10 - 7 =$
$7 + = 10$	7 from 9 leaves how many?	$16 - 7 =$
$7 + = 8$	7 from 10 leaves how many?	$8 - 7 =$
$7 + = 11$	7 from 11 leaves how many?	$11 - 7 =$
$7 + = 13$	7 from 12 leaves how many?	$15 - 7 =$
$7 + = 12$	7 from 13 leaves how many?	$12 - 7 =$
$7 + = 14$	7 from 14 leaves how many?	$9 - 7 =$
$7 + = 7$	7 from 15 leaves how many?	$13 - 7 =$
$7 + = 16$	7 from 16 leaves how many?	$14 - 7 =$

Subtraction

16 12 7 8 10 11 13 14 9 15 7 4
7 7 7 7 7 7 7 7 7 7 0 0

Drill Exercise: Count backward from 16 to 0, by 7; then from 15; then from 14, etc. Complete the exercise below and also orally to your teacher.

16		
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15		
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7		
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Eight Exercise.



1. Mary had 13 cents, and bought a ribbon for 8 cents. How many cents had she left? 8 and what make 13?

2. John bought a lead-pencil for 8 cents, and handed the merchant 15 cents. How much change must he receive? 8 and what make 15? 8 from 15 leaves how many?

Subtraction

3. When May had learned 17 words, her brother Frank had learned 8 less. How many had Frank learned?

4. 6 and 8 are how many? 6 from 14 leaves how many? 8 from 14 leaves how many? How would you illustrate this with the counters?

$8 + = 12$	8 from 8 leaves how many?	$11 - 8 =$
$8 + = 10$	8 from 9 leaves how many?	$15 - 8 =$
$8 + = 8$	8 from 10 leaves how many?	$17 - 8 =$
$8 + = 9$	8 from 11 leaves how many?	$8 - 8 =$
$8 + = 17$	8 from 12 leaves how many?	$10 - 8 =$
$8 + = 13$	8 from 13 leaves how many?	$12 - 8 =$
$8 + = 15$	8 from 14 leaves how many?	$14 - 8 =$
$8 + = 14$	8 from 15 leaves how many?	$9 - 8 =$
$8 + = 11$	8 from 16 leaves how many?	$13 - 8 =$
$8 + = 16$	8 from 17 leaves how many?	$16 - 8 =$

$\underline{8}$ $\underline{10}$ $\underline{9}$ $\underline{17}$ $\underline{15}$ $\underline{11}$ $\underline{13}$ $\underline{12}$ $\underline{16}$ $\underline{14}$ $\underline{8}$ $\underline{3}$
 $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{8}$ $\underline{0}$ $\underline{0}$

Drill Exercise: Count backward from 17 to 0, by 8; then from 16; then from 15, etc. Complete the exercise below and also orally to your teacher.

17		
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16		
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15	
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14	
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12	
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11	
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10	
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Subtraction

9	
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8	
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Ninth Exercise.

1. Make 17 marks in two rows, 9 in one row, and 8 in another row right under the first row. How many marks have you now in all? If you take the 9 away from the 17, how many will remain? If you take away the 8 from the 17, instead of the 9, how many will remain? 9 from 17 leaves how many? Why?
2. If you take 9 from 16, how many will remain? Why? How would you illustrate it with the counters?
3. James bought a book for 9 cents, which took all the money he had but 4 cents. How much did he have at first? 9 from 13 leave how many?
4. If John buys a ball for 9 cents, and hands the merchant 15 cents, how much change should he receive?
5. Mary is 18 years old, and her little sister Ann is but 9. How much older is Mary than Ann?

Subtraction

$9 + = 10$

$9 + = 17$

$9 + = 11$

$9 + = 15$

$9 + = 12$

$9 + = 9$

$9 + = 13$

$9 + = 18$

$9 + = 16$

$9 + = 14$

9 from 9 leaves how many?

9 from 10 leaves how many?

9 from 11 leaves how many?

9 from 12 leaves how many?

9 from 13 leaves how many?

9 from 14 leaves how many?

9 from 15 leaves how many?

9 from 16 leaves how many?

9 from 17 leaves how many?

9 from 18 leaves how many?

$12 - 9 =$

$9 - 9 =$

$11 - 9 =$

$18 - 9 =$

$16 - 9 =$

$10 - 9 =$

$13 - 9 =$

$15 - 9 =$

$14 - 9 =$

$17 - 9 =$

17	9	10	15	18	12	14	16	11	13	9	5
<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>9</u>	<u>0</u>	<u>0</u>

Drill Exercise: Count backward from 18 to 0, by 9; then from 17; then from 16, etc. Complete the exercise below and also orally to your teacher.

18			
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17			
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16			
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15			
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14			
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13			
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12			
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11			
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10			
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9			
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Subtraction

Definition Exercise.

1. There were 8 roses on the bush, and Mary has subtracted 3 of them. How many are there left?
3 subtracted from 8 leaves how many?



2. There are 7 eggs in the nest. If you subtract 3, how many will remain? If you subtract 4, how many will remain? If you subtract 3 from 7, what is the remainder? If you subtract 4 from 7, what is the remainder?



3. If you subtract 2 from 5, what is the remainder? If you subtract 3 from 5, what is the remainder?

4. If you subtract 5 from 9, what is the remainder? If you take 5 from 9, what number is left? (These questions mean the same thing.)

5. If you subtract 2 from 8, what is the remainder? If you take 2 from 8, what number is left?

6. If you subtract 3 from 9, what is the remainder? Ask this question without using the words subtract and remainder.

Subtraction

7. If you take 8 from 12, what number is left? Ask the same question and use the words subtract and remainder.

8. Supply the proper words in the following: If I _____

6 from 13, what is the _____? What is the

_____ when you _____

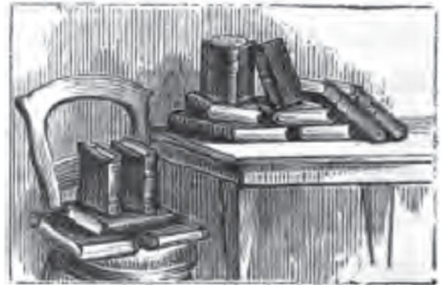
7 from 11? When you _____ 8 from 17, what is the

_____? What is the _____ when 9 is

_____ from 20?

Second Definition Exercise.

1. How many books are on the table? How many are on the chair? How many more books are there on the table than on the chair? What is the difference between 8 books and 5 books?



2. If an orange costs 7 cents and a lemon 5 cents, what is the difference between the price of an orange and the price of a lemon? What is the difference between 7 and 5?

3. What is the difference between 10 dollars and 6 dollars?

Subtraction

4. John worked 9 hours and Henry worked 5 hours. How many more hours did John work than Henry? What is the difference between 9 hours and 5 hours?

5. What is the _____ between 11 and 6?

What is the _____ when you take 6 from 11?

What is the _____ between 8 and 3?

If you _____ 7 from 15, what is the _____?

How do you find the _____ between 10 and 7?

Ans. I _____ 7 from 10.

6. What number does $4 + 7$ make? What number does $3 + 2$ make? What is the difference between 11 and 5?

7. From the sum of 4 and 3 subtract 5.

8. From the _____ of 2, 5 and 6, subtract 8?

9. Add 3, 4, and 7, and from the amount subtract 9. What word could you use instead of amount in asking this question? What instead of subtract?

Subtraction

10. From $3 + 2 + 4 + 1$ subtract 7. What number is $3 + 2 + 4 + 1$?

11. What is the _____ between the _____ of 5, 2, and 1, and 3, 2, and 2? How much is $5 + 2 + 1$? How much $3 + 2 + 2$?

Drill Exercise.

1. $4 + 3 - 2 + 6 + 1 - 8 + 5 - 2 =$ how many?

2. $5 - 2 + 7 - 6 - 3 + 8 - 4 + 6 =$ how many?

3. $1 + 2 + 3 + 4 + 5 - 9 - 2 + 7 - 6 =$ how many?

4. $4 + 8 + 6 - 9 - 4 - 1 + 7 - 8 + 6 =$ how many?

5. $13 - 6 - 4 + 7 - 5 - 8 - 3 + 7 =$ how many?

6. $17 - 9 - 5 + 2 + 8 - 6 + 4 - 1 =$ how many?

Subtraction

7. $7 + 8 - 9 - 2 + 6 - 7 + 2 - 3 =$ how many?

8. $2 + 3 + 7 - 9 + 5 - 6 + 7 - 8 =$ how many?

9. $6 + 7 + 5 - 9 + 3 - 8 - 2 + 7 =$ how many?

10. $15 - 8 - 4 - 2 + 6 - 4 - 2 - 1 =$ how many?

11. $16 - 7 - 6 + 4 + 2 - 6 - 3 + 9 =$ how many?

12. $11 + 2 - 6 - 3 + 5 + 2 - 4 + 1 =$ how many?

13. $10 - 3 - 2 + 7 - 8 - 3 + 6 - 4 =$ how many?

14. $6 + 9 + 2 - 8 - 2 + 4 - 6 + 3 =$ how many?

15. $14 - 6 - 5 + 3 + 2 - 3 + 2 + 4 =$ how many?

16. $9 + 7 - 8 - 2 + 3 - 4 - 3 + 7 =$ how many?

Subtraction

17. $8 + 6 + 2 - 7 - 5 + 3 - 1 + 3 =$ how many?

18. $6 + 7 + 4 - 9 - 3 + 6 - 4 + 8 =$ how many?

19. $3 + 8 + 2 - 7 - 6 + 4 + 5 - 9 =$ how many?

20. $6 - 4 + 2 + 2 + 3 + 3 - 6 - 6 =$ how many?

Practical Exercise.

1. John had 5 cents and 6 cents. He then spent 8 cents, and afterward earned 4 cents. How many had he then?

2. Mary was very fond of flowers. She had 8 little plants, but 3 of them died. Then her cousin gave her 4 plants. How many had she at last?

3. Henry had 15 cents, and spent 6 cents for an orange, 1 cent for a pencil, and 3 cents for some nuts. How many cents had he left?

Subtraction

4. Frank earned 6 cents Monday, spent 4 cents Tuesday, earned 7 cents Wednesday, 4 cents Thursday, spent 5 cents Friday, earned 8 cents Saturday and put 7 cents in the missionary-box on Sunday. How much of his week's earnings had he left?

5. There were 11 boys at play in the yard, when 5 of them went home, 2 went off to play with some other boys, and 4 new boys came. How many boys were there in the yard at last?

6. Frank found a hen's nest with 9 eggs in it. He took out 3, and two days after found that the hens had laid 5 more eggs in the nest. He then took 6 out of the nest. How many did he leave in the nest at last?

7. John had 17 cents. He lost 5, spent 4, earned 3, and gave away 6. How many had he then?

8. A man has agreed to work 9 hours. How many more hours has he to work after he has worked 5 hours? 9 less 5 is how many?

Subtraction

9. I bought an orange for 5 cents, and handed the grocer a piece of money worth 10 cents. How much change must he give me?

10. I gave a boy one dime, and he gave me a glass of chestnuts worth 8 cents. How many cents should he give me in change? 8 and how many make 10?

11. A man has 11 miles to ride. How many more has he to ride after he has ridden 6?

