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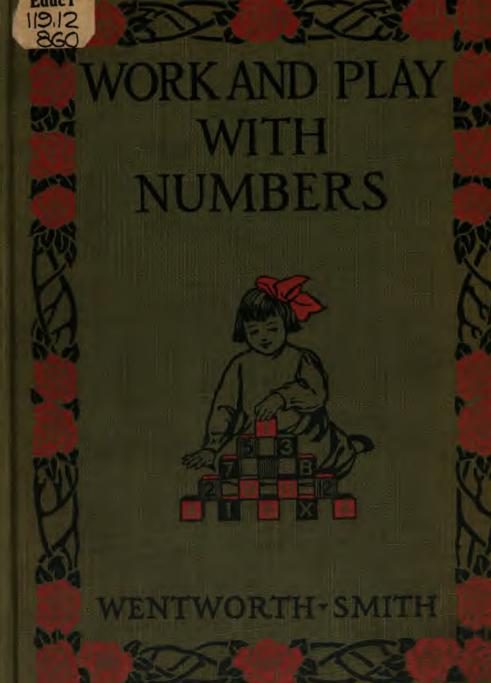
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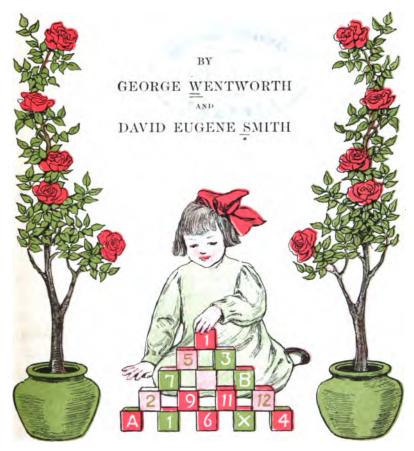
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WORK AND PLAY WITH NUMBERS



GINN AND COMPANY

BOSTON · NEW YORK · CHICAGO · LONDON

1912

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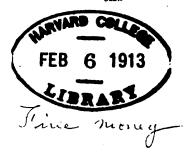
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PREFACE

It has been recognized ever since the days of Pestalozzi that children when they first enter school have a taste for number work and also a considerable knowledge of numerical forms. They use numbers in their games, they talk about them, they like to count, and they enjoy a little work and play with numbers within their mental grasp.

On the other hand, children of this age are not ready for such a study of arithmetic as the formal textbook offers. A textbook of that kind would take away their love for number and would place upon them a burden heavier than they could carry.

Not to begin the study of the subject when the child enters school, however, is to say that the child's natural tastes should not be fostered. What we need is to introduce, in an informal and attractive fashion, such number work as is within his grasp at this time.

Experience shows that children can easily learn the combinations in addition, and part of those in multiplication, before taking up a formal study of the subject; in other words, they can cover the work included in this little book. Since the entire multiplication table is sometimes required, it is given at the end of the book, to be developed in the usual manner if necessary.

To meet the need which the experience of teachers has justified, the authors have set forth, informally and in simple language, the number facts that should be mastered. They have not attempted to prepare a textbook of the conventional type, nor yet a mere book of devices to impose upon the teacher certain methods that she cannot profitably use. They have sought to offer to the schools a book that shall serve as a guide and helper both to the teacher and to the pupil, one that shall save labor, furnish a list of reading exercises, and suggest a basis for somewhat informal work with beginners.

It will be observed that the type has been selected with greatest care. A child at this time needs to train the eye to see number relations, and that he may do this without undue visual exertion, a large and heavy type is used. He also needs to write numbers, and when asked to do this the numbers have been put in script. He also needs to read the ordinary printed numerals, and when these appear in sentences they are in the usual printed form. In this way, with a minimum of eye strain, he accomplishes the important results mentioned.

The authors desire to express their appreciation of the artistic work of Miss Hope Dunlap, whose illustrations will, they feel sure, bring delight to thousands of children.

GEORGE WENTWORTH DAVID EUGENE SMITH

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WORK AND PLAY WITH NUMBERS

CHAPTER I

NUMBER WORK TO 10. COUNTING TO 100

HICKORY, dickory, dock,
The mouse ran up the clock,
The clock struck one,
And down he ran,
Hickory, dickory, dock.

1 one • / one

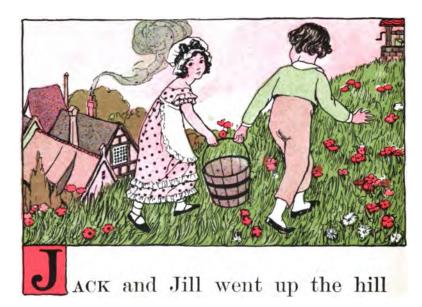
The clock struck one.

I see one clock.

I see one

I see one ★ and one ৬

I write one like this: /.



To get a pail of water.

Jack fell down and broke his crown,

And Jill came tumbling after.

2 two

2 two

I see two Jack and Jill have one



One and one are two.

$$1 + 1 = 2$$

Two hands hold the

One & and one & are two &

Two less one is one.

$$2 - 1 = 1$$

$$\frac{-1}{1}$$

Two less two is none.

$$2 - 2 = 0$$

$$/ + / = 2$$
 $/ - / = 0$ $/ + 0 = /$

$$/ - / = 0$$

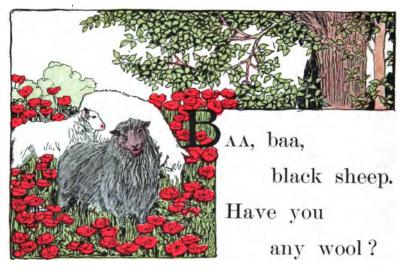
$$/ + 0 = /$$

$$2 - / = /$$

$$2-2=0$$

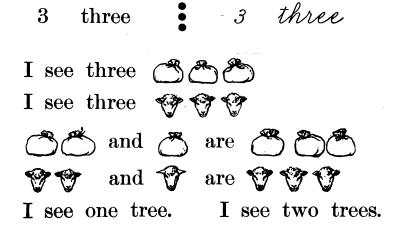
$$2-/=/$$
 $2-2=0$ $2+0=2$





Yes sir, master, three bags full.

3 three



One A and one A are two A A
One and one and one are
three A A

Read:

Two and one are three.

One and two are three.

Three less one is two.

Three less two is one.

Three less none is three.



In comes four legs
And runs away with one leg.
Up jumps two legs,
Catches up three legs,
Throws it after four legs,
And makes him bring back one leg.

4 four # four

and and are are

Two and two are four.

Three and one are four.

One and three are four.

Four less three is one.

Four less two is two.

Four less one is three.

Two legs and two legs are four legs.

Four is one more than three.

$$/+3=4$$
 $4-3=1$ $4+0=4$
 $3+/=4$ $4-/=3$ $4-0=4$
 $2+2=4$ $4-2=2$ $4-4=0$



HIS little pig went to market;

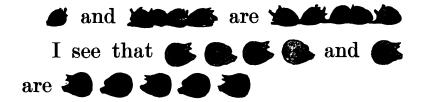
This little pig stayed at home; This little pig had roast beef; This little pig had none; This little pig said, "Wee, wee! I can't find my way home."

5 five



5 five

FIVE 15



Read:

Four and one are five.

One and four are five.

Three and two are five.

Two and three are five.



Five and one are six.

One and five are six.

Four and two are six.

•••• and •• are

I see that and are are





We see that **\(\rightarrow \)** and **\(\rightarrow \r** are **AAAAA**

Read:

$$6 + 0 = 6$$

$$4 + 2 = 6$$

$$2 + 4 = 6$$

$$5 + 1 = 6$$

$$3+3=6$$

$$1 + 5 = 6$$



AS I was going to St. Ives

I met a group of seven wives;
Each wife had seven sacks,
Each sack held seven cats,
Each cat had seven kits.
Kits, cats, sacks, and wives,

7 seven



How many were going to St. Ives?

7 seven

I see

6 cats and 1 cat are 7 cats.
5 sacks and 2 sacks are 7 sacks.
Four and three are seven.

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



LITTLE Bo-Peep has lost her sheep And can't tell where to find them;
Leave them alone, and they will come home

And bring their tails behind them.

8 eight 8 eight

I see 💸 💸 💸 💸 💸 💸 7 sheep and 1 sheep are 8 sheep.
I see that 💎 💸 💸

and TOTOTO

EIGHT 21

I see that was and are was and see that was and see and see and see are

Read:

7 sheep and 1 sheep are 8 sheep.

6 trees and 2 trees are 8 trees.

5 boys and 3 boys are 8 boys.

4 girls and 4 girls are 8 girls.



There was an old woman who lived in a shoe;

She had so many children she did n't know what to do.

She gave them some broth without any bread,

And whipped them all soundly and sent them to bed.

9 nine



9 nine

23

8 shoes and 1 shoe are 9 shoes.

7 toes and 2 toes are 9 toes.

6 boys and 3 boys are 9 boys.

5 girls and 4 girls are 9 girls.

Read:

8 and 1 are 9.
$$8+1=9$$

7 and 2 are 9.
$$7 + 2 = 9$$

6 and 3 are 9.
$$6+3=9$$

5 and 4 are 9.
$$5+4=9$$

24 TEN



10 ten •••• /0 ten

Read:

12	10	14	16	11
18	15	19	17	13

$$3 \text{ tens} = 30$$

$$4 \text{ tens} = 40$$
 Forty

$$5 \text{ tens} = 50$$
 Fifty

$$6 \text{ tens} = 60$$
 Sixty

$$7 \text{ tens} = 70$$
 Seventy

$$8 \text{ tens} = 80 \quad \text{Eighty}$$

$$10 \text{ tens} = 100$$
 One hundred

17	12	9	15	7
19	30	8	80	20
60	14	11	16	70
100	90	40	13	18

Write:

40 forty



$$20 + 1 = 21$$

Twenty-one

$$20 + 2 = 22$$

Twenty-two

$$20 + 3 = 23$$

 $20 + 4 = 24$

$$20 + 7 = 27$$

$$20 + 5 = 25$$

$$20 + 8 = 28$$

$$20 + 6 = 26$$

$$20 + 9 = 29$$

 $20 + 10 = 30$

$$30 + 1 = 31$$

Thirty-one

$$40 + 3 = 43$$

Forty-three

Read:

11	12	15	17	19
21	22	25	27	29
31	32	36	38	39
41	42	43	44 .	47
51	52	55	57	58
61	62	60	66	67
71	72	73	75	77
81	82	80	88	86
91	92	95	97	99

20	10	6	9	17
31	90	30	42	60
63	80	54	75	40
50	86	62	70	92
55	88	98	77	99
56	89	74	79	100

Write:



$$30 + 2 = 32$$



$$40 + 8 = 48$$

$$20 + b = 30 + 5 = 50 + 7 =$$

$$60 + 7 = 80 + 2 = 40 + 3 =$$

$$70 + 5 = 30 + 2 = 90 + 9 =$$

$$20 + 7 = 80 + b = 40 + 4 =$$

$$50 + 5 = 70 + 8 = 60 + 7 =$$

I saw 30 trees.

We saw 42 cars.

We saw 14 birds.

Mary has 20 books.

The boy has 12 apples.

The man has 25 horses.

Read:

17	23	41	19	36
52	82	18	43	68
87	60	29	70	54

$$30+9=$$
 $40+5=$ $60+44=$
 $50+3=$ $90+8=$ $40+8=$
 $70+7=$ $60+9=$ $70+7=$
 $80+6=$ $30+2=$ $50+44=$
 $90+5=$ $20+9=$ $30+6=$

- 1 and 1 are 6 and 1 are —
- 2 and 1 are 7 and 1 are —
- 3 and 1 are 8 and 1 are —
- 4 and 1 are 9 and 1 are —
- 5 and 1 are 0 and 1 are —
- 5 balls and 1 ball are balls.
- 7 books and 1 book are books.
- 6 books and 1 book are books.

Add:

- 2 4 3 5 1 0 8 7 9
 - 1 1 1 1 1 1 1 1 1

1	and — are	2	5	and — are	6
2	and — are	3	6	and — are	7
3	and — are	4	7	and — are	8
4	and — are	5	8	and — are	9

5 men - 1 man = --- men.

There were 7 birds in the tree. One flew away. There were — birds left in the tree.

Read and learn:

$$1-1=0$$
 $5-1=4$ $9-1=8$
 $2-1=1$ $6-1=5$ $10-1=9$
 $3-1=2$ $7-1=6$ $1-0=1$
 $4-1=3$ $8-1=7$ $2-0=2$
Write:

- 2 books and 2 books are books.
- 3 apples and 2 apples are apples.
- 4 hats and hats are 6 hats.
- 7 birds and birds are 9 birds.

Read and learn:

$$0+2=2$$
 $3+2=5$ $6+2=8$

$$1+2=3$$
 $4+2=6$ $7+2=9$

$$2+2=4$$
 $5+2=7$ $8+2=10$

$$2-2=0$$
 $5-2=3$ $8-2=6$

$$3-2=1$$
 $6-2=4$ $9-2=7$

$$4-2=2$$
 $7-2=5$ $10-2=8$

$$-2$$
 -2 -2 -2 -2 -2 -2

- 1 apple and 3 apples are apples.
- 3 books and 3 books are books.
- 6 desks and desks are 9 desks.
- 4 boats and boats are 7 boats.

Read and learn:

$$0+3=3$$
 $3+3=6$ $6+3=9$

$$1+3=4$$
 $4+3=7$ $7+3=10$

$$2+3=5$$
 $5+3=8$ $3+0=.3$

$$3-3=0$$
 $6-3=3$ $9-3=6$

5 apples and 4 apples are — apples.

4 boys and — boys are 8 boys.



Kate had 7 roses. She gave Ruth 3 roses. How many roses were left?

Read and learn:

$$1 + 4 = 5$$
 $3 + 4 = 7$ $5 + 4 = 9$
 $2 + 4 = 6$ $4 + 4 = 8$ $6 + 4 = 10$
 $5 - 4 = 1$ $7 - 4 = 3$ $9 - 4 = 5$
 $6 - 4 = 2$ $8 - 4 = 4$ $10 - 4 = 6$
Write:

How much is 9 less 5?

I have 7 apples and I give away 5 apples. How many apples are left?

From 6 books I take away 5 books. How many books are left?

Read and learn:

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

- 3 fish and 6 fish are fish.
- 2 cows and 6 cows are cows.
- 3 sheep and sheep are 9 sheep.
- 4 boys and boys are 10 boys.

A man had 8 horses. He sold 6 horses. How many horses were left?

Read and learn:

$$1+6=7$$
 $4+6=10$
 $2+6=8$ $0+6=6$

8-6=2

3+6=9

I see 7 desks.

7 desks and 2 desks are — desks.

20 and 7 are how many?

40 and 7 are how many?

30 birds and 7 birds are — birds.

50 men and — men are 57 men.

Read and learn:

$$0+7=7$$
 $3+7=10$ $8-7=1$
 $1+7=8$ $7+0=7$ $9-7=2$
 $2+7=9$ $7-7=0$ $10-7=3$

1 cup and 8 cups are — cups.

8 men and 1 man are — men.

1 rose and — roses are 9 roses.

10 roses and — roses are 18 roses.

2 girls and 8 girls are — girls.

From 9 eggs a man took away 8 eggs. There was left — egg.

Read and learn:

$$40 + 8 = 50 + 8 = 10 + 8 =$$
 $70 + 8 = 30 + 8 = 60 + 8 =$

CHAPTER II ADDITION TABLE COMPLETED



We may count these dolls by 2's.

2

4

6

8

10

We can count fast by 2's.

Let us count the girls by 2's.

Count by 2's from 2 to 20.

Read:

It is easy to count by 2's to 30.

Read:

Count by 2's from 2 to 50.

Count by 2's from 2 to 10.

Count by 2's from 2 to 20.

Count by 2's from 2 to 30.

How many are 2 and 2 and 2?

Read:

2	4	6	8	10
12	14	16	18	20
22	24	26	28	30
32	34	36	38	40
42	44	46	48	50

Count by 2's from 50 to 60.

32	34	36	38	60
62	64	66	68	70
72	74	76	78	80
82	84	86	88	90
92	94	96	98	100











I see 5 cherries in 1 bunch.

I see 10 cherries in 2 bunches.

I see 15 cherries in 3 bunches.

I see 20 cherries in 4 bunches.

Let us count by 5's to 25.

5 10 15 20 25

Let us count by 5's to 35.

$$5+5=10$$
 $10+5=$ $10+=15$
 $15+5=20$ $20+5=$ $15+=20$
 $25+5=30$ $30+5=$ $20+=25$
 $35+5=40$ $40+5=$ $30+=35$
 $45+5=50$ $50+5=$ $40+=45$



Here are 5 cakes.

There are 5 candles on each cake. On 2 cakes there are 10 candles. On 3 cakes there are 15 candles.

30 35 40 45 50

Count by 5's from 50 to 75.

$$25+5=30 \qquad 50+5= \qquad 75+5= \\ 30+5=35 \qquad 55+5= \qquad 80+5= \\ 35+5=40 \qquad 60+5= \qquad 85+5= \\ 40+5=45 \qquad 65+5= \qquad 90+5= \\ 45+5=50 \qquad 70+5= \qquad 95+5=$$



The chair is 4 feet high.

My school desk is more than 2 feet long.

Kate is 3 feet tall.

Rob is 4 feet tall.

Can you draw a line
1 foot long?

Write:

- 3 feet + 4 feet are feet.
- 5 feet + 3 feet are feet.
- 7 feet + 1 foot are feet.
- 6 feet and feet are 8 feet.
- 4 feet and feet are 7 feet.

Add:

b	teet	9	ieet	3	ieet
3	feet	2	feet	3	feet

The book is more than 7 inches long.

It is more than 5 inches wide.

There are 12 inches in 1 foot.



10 inches and 2 inches are 12 inches.

12 inches = 1 foot

This line is one inch long.

Write .

- 12 inches = 1 foot.
- 2 inches + 10 inches = 12 inches.
- 11 inches + 1 inch = 12 inches.
- 1 inch + 11 inches = 12 inches.
- 12 inches + 0 inch = 12 inches.



- 2 pints equal 1 quart.
- 2 pints of oil make 1 quart of oil.
- 1 pint of milk and 1 pint of milk make 1 quart of milk.

We buy milk by the — We sell cream by the —

- 2 pints equal 1 quart.
- 2 pints and 2 pints are pints.
- 5 quarts and 4 quarts are quarts.

Read:

- 4 pints and 3 pints are pints.
- 5 pints and 2 pints are pints.
- 6 pints and 1 pint are pints.
- 7 quarts and quarts are 9 quarts.
- 3 quarts and quarts are 8 quarts.
- 5 quarts and quarts are 15 quarts.

2 pints = 1 quart

Write:		,
7 pints	7 pints	5 pints
+2 pints	-2 pints	+2 pints
6 quarts	6 quarts	4 quarts
+2 quarts	$\frac{-2 \text{ quarts}}{}$	+2 quarts
3 pints	7 pints	5 pints
+6 pints	+ 2 pints	+4 pints

Read and learn:

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

Helen has 3 dolls. Her aunt gives her 2 more. Helen then has — dolls.

Emily has 5 roses and picks 2 more. She then has — roses.

Fred has 7 fish. He catches 2 more. He then has — fish.

3 quarts + 2 quarts are — quarts.

Read and learn:

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

A man had 3 quarts of milk. He sold 2 quarts. How many quarts had he left?

John had 12 fish. He lost 2 of them. How many fish had he left? How much is 11-2? 10-2?

9 quarts - 2 quarts are — quarts?



How many girls are 3 girls and 2 girls? 2 girls and 3 girls?

How many girls are 1 girl and 3 girls? 3 girls and 1 girl?

Read and learn:

How many roses are

7 roses and 3 roses?

How many roses are

10 roses less 3 roses?

How many are 4 + 3?

How many are 7 - 3?

How many are 7-4?



Read and learn:

$$3 - 3 = 0$$
 $7 - 3 = 4$

$$7 - 3 = 4$$

$$11 - 3 = 8$$

$$4 - 3 = 1$$

$$4-3=1$$
 $8-3=5$

$$12 - 3 = 9$$

$$5 - 3 = 2$$

$$9 - 3 = 6$$

$$6 - 3 = 3$$

$$10 - 3 = 7$$

$$6-3=3$$
 $10-3=7$ $14-3=11$

$$-3$$
 -3 -3 -3 -3 -3 -3

$$/2 - 2 =$$

$$//+3 = /2-2 = 9-/=$$



How many are 1 and 4? 2 and 4?

Read and learn:

3	2	7	4	/	6	5	8
4	<i>4</i> –	4	4	4	4	4	4
						 ·	_

How many horses are 6 horses and 4 horses?

How many horses are 10 horses less

4 horses?

How many books are 3 books and

4 books?

How many books are 7 books less

4 books? 7 books less 3 books?

Read and learn:

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



How many leaves are 4 leaves and 5 leaves?

How many leaves are 5 leaves and 4 leaves? 3 leaves and 5 leaves?

How many are 6 and 5?

How many are 7 and 5?

Read and learn:

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



How many leaves are 6 leaves and 5 leaves?

How many leaves are 11 leaves less 5 leaves?

How many boys are 10 boys less 5 boys? 12 boys less 5 boys?

Read and learn:

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

Add 3 boys and 6 boys.

Add 4 quarts and 6 quarts.

Add 5 books and 6 books.

Add 6 fish and 6 fish.

Add 7 men and 6 men.

Add 8 marbles and 6 marbles.

Read and learn:

$$6 + 5 = 6 + 4 = 6 + 6 = 6 + 7 = 6 + 9 = 6 + 7 = 6 +$$

6 and 4 are how many?

6 from 10 are how many?

4 from 10 are how many?

10 from 10 are how many?

Read and learn:

$$6-6=0$$
 $10-6=4$ $14-6=8$

$$9-6=3$$
 $13-6=7$ $17-6=11$





Add 3 birds and 7 birds.

Add 7 birds and 3 birds.

How many are 5 birds and 7 birds? Add 6 and 7. Add 7 and 6.

Read and learn:

$$1+7=8$$
 $5+7=12$ $9+7=16$

$$2+7=9$$
 $6+7=13$ $10+7=17$

$$3+7=10$$
 $7+7=14$ $7+0=7$

$$7 + 8 = 7 + 9 = 7 + 10 =$$

How many are 4 and 7?

How many are 11-7?

How many are 7 and 7?

How many are 14-7?

How many are 8 and 7?

How many pencils are 15 pencils less 7 pencils?

Read and learn:

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

How many are 1 and 8?

How many are 2 and 8?

How many desks are 5 desks and 8 desks?

How many girls are 1 girl and 1 girl and 8 girls?

How many are 8 and 8? 9 and 8?

Read and learn:

How many are 4 and 8?

How many blocks are 12 blocks less 8 blocks?

How many marbles are 3 marbles and 8 marbles?

How many marbles are 11 marbles less 8 marbles?

Read and learn:

Add 1 and 9. Add 2 and 9.

Add 3 and 9. Add 4 and 9.

Add 5 books and 9 books.

Add 2 men and 9 men.

Add 3 hats and 9 hats.

Add 4 pencils and 9 pencils.

How many apples are 5 apples and 9 apples?

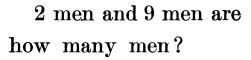
Add 6 desks and 9 desks.

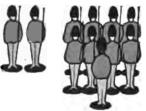
Read and learn:

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

Here are 2 men and

9 men.





From 11 men take 9 men.

How many chairs are 3 chairs and 9 chairs?

How many chairs are 12 chairs less 9 chairs?

Read and learn:

$$9-9=0$$
 $13-9=4$ $17-9=8$
 $10-9=1$ $14-9=5$ $18-9=9$
 $11-9=2$ $15-9=6$ $19-9=10$
 $12-9=3$ $16-9=7$ $20-9=11$
Write:

How many pears are 5 pears and 10 pears?

How many pears are 15 pears less 10 pears? 15 pears less 5 pears?

Read and learn:

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

Write:
$$/0 + 7 = /0 + 9 = /0 + 8 =$$

Add 2 cubes and 3 cubes.

Add 2 tens and 3 tens.

Add 20 and 30; 30 and 20.

2 cubes	2 tens	20
3 cubes	3 tens	30
5 cubes	$\overline{5}$ tens	$\overline{50}$

Add 20 and 40; 20 and 60.

Add 10 boys and 4 boys.

Add 20 books and 4 books.

Add 30 chairs and 4 chairs.

Read:

Write and add:

10 20 30 60 40 90 70 80

$$\frac{7}{2}$$
 $\frac{2}{8}$ $\frac{8}{9}$ $\frac{6}{6}$ $\frac{4}{4}$ $\frac{3}{8}$ $\frac{8}{8}$

90 70 20 30 60 10 20 40

 $\frac{3}{2}$ $\frac{2}{8}$ $\frac{8}{7}$ $\frac{6}{9}$ $\frac{9}{4}$ $\frac{4}{3}$

60 20 80 30 20 40 50 70

 $\frac{10}{2}$ $\frac{30}{2}$ $\frac{10}{2}$ $\frac{50}{2}$ $\frac{60}{2}$ $\frac{20}{2}$ $\frac{30}{2}$ $\frac{20}{2}$

Add 2 and 3. Add 12 and 3.

Add 4 and 2. Add 24 and 2.

Add 3 and 5. Add 43 and 5.

Read:

Add 3 and 5. Add 20 and 10. See how we add 23 and 15. I see that 23 and 15 are 38. Read:								
12	21	3	0 2	22	34	52	61	
+ 11	+ 12	+2	<u>9 + 3</u>	<u>32</u> +	41 -	+ 27	<u>+ 14</u>	
23	33	3 5	9 5	54	75	7 9	75	
W	rite an	d add	:			•		
22	3/	72	15	61	27	36	5/	
//	3/	/ <u>5</u>	22	33	<u>2/</u>	22	<i>30</i>	
/3	27	36	4/	73	33	4/	68	
/3	<u>20</u>	<u>4/</u>	58 —	/2	46	<u>4/</u>	<i>20</i>	
15	25	35	42	4/	32	52	61	

33 33 23 51 32 41 47 28

How much is
$$7-4$$
?

How much is $5-0$?

How much is $57-4$?

 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57
 57

I see that 57 less 4 is 53.

Read:

Write:

8 | 18 | 48 | 68 | 9 | 19 | 39 | 69

$$-5 -5 -5 -5 -5 -5 -3 -3 -3 -3 -3$$

7 | 17 | 37 | 57 | 6 | 16 | 56 | 96

 $-5 -5 -5 -5 -5 -1 -1 -1 -1$

9 | 19 | 69 | 89 | 8 | 18 | 58 | 88

 $-6 -6 -6 -6 -6 -7 -7 -7 -7$

How much is $8-5$? How much is $30-10$? See how we take 15 from 38. I see that 38 less 15 is 23.									
Rec	id:								
22	34	47	58	62	79	83			
<u> </u>	<u>- 12</u>	<u>- 26</u>	<u>- 35</u>	-21	<u>- 38</u>	<u>-20</u>			
11	22	21	23	41	41	63			
Wr	ite :								
37	42	81	68	93	48	29			
-/2	-3/	<u>-50</u>	-42 —	-3/	- <i>2</i> 4	-/6			
29	36	48	72	94	82	77			
-/2	- /4	-2/	-20	- 33 	-40 	-32			
	`-26 = '-27 =	•			74-2 89-4				

Add
$$1 + 1 + 1$$
.

Add
$$2 + 3$$
. Add $2 + 3 + 1$.

Add
$$3 + 5$$
. Add $3 + 5 + 1$.

Read:

$$2+/+2=$$
 $3+4+/=$
 $3+3+2=$ $4+3+2=$
 $4+/+/=$ $5+2+0=$
 $5+2+/=$ $6+0+3=$

How	mucl	n is 1	+1+1	?	31
How	mucl	h is 3	+ 2 + 1	?	21
How	mucl	is 3	0 + 20	+ 10?	<u>11</u>
How	mucl	n is 3	1 + 21	+ 11?	63
I see	e that	31 + 2	21 + 11	= 63.	
Write	and ad	d :			
30	30	32	33	34	34
20	21	22	21	22	21
10	10	10	12	//	12
-					
41	41	42	50	51	51
21	21	23	10	10	10
21	22	22	20	20	24
60	61	63	63	64	65
10	10	10	12	12	12
20	20	20	20	21	22

CHAPTER III PRACTICE ON THE ADDITION TABLE





If Rob has 9 marbles and John has 10, how many do both have?

Read and add:

$$\frac{1}{2}$$
 $\frac{1}{2}$ $\frac{1}$



How many ships are 3 ships and 2 ships? 2 ships and 3 ships?

How many men are 5 men and 2 men? 8 men and 2 men?

V	rue an	ia aaa	:				
0	10	23	33	4	14	54	84
2	2	2	2	2	2	2	2
		-					
5	15	35	65	6	16	76	86
2	2	2	2	2	2	2	2
7	27	57	97	8	18	9	39
2	2	2	2	2	_2	2	2

Count by 2's like this: 2, 4, 6, 8, 10, and so on to 50.

Count by 2's beginning with 1, thus: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19.

Write the 2's from 2 to 50, like this: 2, 4, 6, 8, 10, and so on.
Write 1, 3, 5, 7, 9, 11, to 51.

If you have 7 apples and use 2 of them, how many are left?

If 9 of you stand and then 2 sit, how many are left standing?

5 9 2 6 3 8	4 7
-2 -2 -2 -2 -2 -2	2 -2
187 ***	
Write and subtract:	
7 17 47 5 25 95 4	(/4
2 2 2 2 2 2 2	2
6 26 56 3 43 93 9	1 49
2 2 2 2 2 2 2	2
8 78 88 10 20 30 40	0 50
2 2 2 2 2 2 .	2 2

If 10 boats start out but 2 turn back, how many go on?



If 2 more

Read:

turn back, how many go on? How many are 8+2? 10-2?

Read and subtract:

$$6-3=$$
 $9-3=$ $4-3=$ $12-3=$ $5-3=$ $3-3=$ $10-3=$ $11-3=$ $8-3=$ $7-3=$ $13-3=$ $14-3=$

Count by 3's, beginning with 3, thus: 3, 6, 9, 12, and so on to 21.

Count by 3's, beginning with 1, thus: 1, 4, 7, 10, and so on to 22.

Count by 3's, beginning with 2,

Count by 3's, beginning with 2 thus: 2, 5, 8, 11, and so on to 23.

Read and learn:

. /	2	3	4	3	/	0	9
3	3	. 3 	3	3	3	3	3
		29					

How many boys are 7 boys and 3 boys? 27 boys and 3 boys?

How many girls are 12 girls less

3 girls? 32 girls less 3 girls?

If you have 9 roses and I give you 3 roses, how many roses will you have?

How much is 9 + 3? 19 + 3? 39 + 3?

2/	32	73	55	76	87	69	80
. 3	3	.3	3	3	3	3	3
W	Trite an	d subtr	ract :				
10	//	/3	14	15	17	18	19

$$\frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3}$$
 $\frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3}$
 $\frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3} \quad \frac{3}{3}$

Read and subtract:

$$5-4=$$
 $6-4=$
 $12-4=$
 $20-4=$
 $9-4=$
 $10-4=$
 $22-4=$
 $24-4=$
 $7-4=$
 $11-4=$
 $13-4=$
 $27-4=$
 $8-4=$
 $21-4=$
 $23-4=$
 $26-4=$

Count by 4's, beginning with 4, thus: 4, 8, 12, and so on to 20.

Count by 4's, beginning with 1, thus: 1, 5, 9, and so on to 17.

Count by 4's, beginning with 2, thus: 2, 6, 10, and so on to 18.

Write and learn:

4	8	12	16	20
24	28	32	36	40
/	5	9	/3	17
21	25	29	33	37
2	6	10	14	18
22	26	30	34	38
. 3	7	//	15	19
23	27	3/	35	39

How many chickens are 16 chickens and 4 chickens? 36 and 4? 46 and 4? How many inches are 7 inches and 3 inches? 17 and 3? 57 and 3?

If you have 10 pears and eat 2 of them, how many pears have you left?
Add 27 and 3; 26 and 4; 29 and 1; 28 and 2; 30 and 0.

Write and add:

24	33	27	36	28	87	92	99
12	//	14	12	14	12	30	33

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

Read and subtract:

$$7-5=$$
 $9-5=$ $15-5=$ $19-5=$ $8-5=$ $10-5=$ $14-5=$ $17-5=$ $5-5=$ $11-5=$ $12-5=$ $18-5=$ $6-5=$ $13-5=$ $16-5=$ $20-5=$

How many fingers have you on one hand, counting also the thumb? How many fingers on both hands?

If you had as many apples as fingers on one hand, how many apples would you have?

If you had as many oranges as fingers on both hands, how many oranges would you have?

If there are 5 roses in each bunch, how many roses are there in 2 bunches? in 3 bunches?

5	15	25	65	10	20	30	70
5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5

Read, adding 5 to each number:

1	4	6	5	2	8	9	3	7
11	24	36	45	22	18	29	33	17
31	44	26	15	12	38	49	23	37
61	14	56	35	32	7 8	19	13	77

Count by 5's, beginning with 5, thus:

- 5, 10, 15, 20, and so on to 50.

 Count by 5's, beginning with 1, thus:
- 1, 6, 11, 16, 21, and so on to 51. Count by 5's, beginning with 2, thus:
- 2, 7, 12, 17, 22, and so on to 52. Count by 5's, beginning with 3, thus:
- 3, 8, 13, 18, 23, and so on to 48.

 Count by 5's, beginning with 4, thus:
- 4, 9, 14, 19, 24, and so on to 49.

 Write the 5's from 0 to 100, thus:
 0, 5, 10, 15, and so on.



How many birds are 5 birds and 6 birds? 6 birds and 5 birds?

How many birds are 11 birds less 5 birds? 11 birds less 6 birds?

Here are 11 birds, and 6 of them are in a tree. The rest are flying. How many birds are flying?

How many are 6 and 5? 16 and 5? 26 and 5? 76 and 5? -

How many are 6 less 5? 26 less 5? 86 less 5? 76 less 5?



How many birds are 9 birds and 7 birds? 7 birds and 9 birds?

How many birds are 16 birds less 7 birds? 16 birds less 9 birds?

If 16 birds were on the branch and 7 flew away, how many birds were left on the branch?

How many are 9 and 7? 19 and 7? 39 and 7? 59 and 7?

How many are 16 less 7? 26 less 7? 36 less 7? 66 less 7?

Write:

$$/+4+2+6=$$
 $3+3+4+2=$ $5+/+7+/=$ $2+4+3+/=$

Read and subtract:

$$\frac{7}{2}$$

$$\frac{7}{2}$$
 $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$

Read and subtract:

$$7$$
 17 67 8 18 98 9 19
 $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$ $\frac{7}{2}$
 10 20 30 70 11 21 31 41
 $\frac{7}{2}$ $\frac{7}{2}$

$$\frac{8}{-}$$
 $\frac{8}{-}$ $\frac{8}$

8	<u>8</u>	<i>8</i> ——		8	8	<i>8</i>	<i>8</i>
	86						
8	8	8	8	8	8	8	8
9	19	29	89	10	60	80	90

Read and subtract:









20 - 9 =



12-9=



10 – 9 =

Read and subtract:

17 - 9 =

Read:

$$0+10=$$
 $2+10=$ $10-10=$ $13-10=$ $5+10=$ $8+10=$ $16-10=$ $17-10=$ $3+10=$ $6+10=$ $18-10=$ $11-10=$ $9+10=$ $4+10=$ $12-10=$ $19-10=$ $1+10=$ $10+10=$ $14-10=$ $15-10=$ $7+10=$ $11+10=$ $20-10=$ $21-10=$

Write and add:

How many pencils are 2 pencils and 3 pencils and 4 pencils?

How many chairs are 10 chairs less 2 chairs? less 2 chairs more?

Write	and	add ·
11 / 100	WHILE	((((()

12	22	32	64	82	53	72	81
	12						
2	4	3	/	/	2	3	4
	2						
	/						
	/						
						_	
21	3/	12	34	25	33	16	17
//	2/	/3	12	3/	22	20	30
	14						
	20						



Here are 12 eggs.

Here are a dozen eggs.

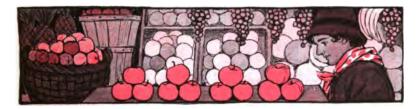
12 eggs are a dozen eggs.

How many eggs are a dozen eggs less 2 eggs?

How many eggs are a dozen eggs and 2 eggs?

Write:

$1 \operatorname{dozen} + 1 =$	$1 \operatorname{dozen} - 1 =$
1 dozen + 2 =	$1 \operatorname{dozen} - 2 =$
$1 \operatorname{dozen} + 3 =$	$1 \operatorname{dozen} - 3 =$
$1 \operatorname{dozen} + 4 =$	$1 \operatorname{dozen} - 4 =$



12 apples are 1 dozen apples.

How many apples are 1 dozen apples less 3 apples?

How many apples are 1 dozen apples less 6 apples?

Write and learn:

24 are 2 dozen. 4	48 ε	are	4	dozen.
-------------------	------	-----	---	--------

Write:

$$2 \, dozen + 6 = 2 \, dozen - 4 =$$

$$3 \, dozen + 4 = 3 \, dozen - 6 =$$

$$4 \ dozen + 2 = 4 \ dozen - 8 =$$

$$5 \, dozen + 1 = 5 \, dozen - 1 =$$

Here are two	lines.	
The first line is	longer	
than the second	line.	

The second line is shorter than the first line.

Which is your longest finger? Which is your shortest finger?

Which desk is longer, your desk or the teacher's desk?

Who is tallest in this class?

Who is shortest in this class?

Who is taller, you or the teacher?

Who is taller, Elizabeth or Ralph? Elizabeth or the teacher?

Which is more, a pint or a quart?

Which is shorter, an inch or a foot? Which is the longer?

Which is more, 10 or a dozen?
Which is less, 6 or 10? 6 or 4?
Which is more, 3 quarts of milk
or 2 quarts of milk?

Which is less, 3 pints or 4 pints? How much more is 5 than 2?

How much less is 8 than 10?
How much less is 9 than a dozen?
How much more is 16 oranges than a dozen oranges?

How many eggs must you add to 20 eggs to make 2 dozen eggs?

How many eggs must you take from 40 eggs to leave 3 dozen eggs?

If you have 18 inches of ribbon and I have 2 inches more than you, how many inches of ribbon have I?



The children are weighing a book and some candy.

The book weighs a little less than a pound.

How many pounds do you weigh?
What do we buy by the pound?
Can you tell me something that
is sold by the ounce?

16 ounces = 1 pound

4 or 5 pencils weigh about 1 ounce. How many ounces in 1 pound and 4 ounces?

Read:

- 1 pound = 16 ounces.
- 1 pound and 4 ounces = ounces.
- 1 pound less 6 ounces = ounces.
- 1 pound and 10 ounces = ounces.
- 1 pound less 10 ounces = ounces.

Write:

- 12 pounds + 14 pounds =
- 15 pounds + 13 pounds =
- 24 pounds + 31 pounds =
- 43 pounds + 24 pounds =
- 36 pounds 12 pounds =
- 47 pounds 25 pounds =
- 58 pounds 32 pounds =
- 68 pounds 41 pounds =
- 12 ounces + 3 ounces + 20 ounces =



How many feet are there in 1 yard?

How many inches are there in 1 foot? in 1 yard?

Do you know how cloth is measured?

Draw a line 1 inch long on the blackboard.

Draw a line 1 foot long.

Draw a line 1 yard long.

Read and learn:

12 inches = 1 foot 3 feet = 1 yard

Write:

3 feet + 3 feet = ---- feet.

I find that 2 yards = — feet.

Read:

- 3 feet are equal to yard.
- 6 feet are equal to yards.
- 1 yard and 1 foot are feet.
- 1 yard and 2 feet are feet.
- 1 yard less 1 foot is feet.
- 1 yard less 2 feet is foot.

We buy cloth by the yard.

Write:

12 inches and 12 inches and 12 inches are — inches.

In 1 foot there are — inches.

In 3 feet there are 12 inches and 12 inches and 12 inches, or — inches.

In 1 yard there are — inches.

1 yard of cloth is the same as 36 inches of cloth.



The girl adds 12 and 21. 12 and 21 are how many?

Write and add:

Write and subtract:

36	42	66	72	87	75	96	99
12	21	33	40	61	34	35	88

CHAPTER IV

NUMBERS TO 1000. MULTIPLICATION



Here are 4 tens, or 40.

10 tens make 1 hundred.

We write 1 hundred like this: /00.



Here are 3 hundreds. We write 3 hundreds like this: 300.

Read:

200	300	400	500
600	700	800	900

Write in figures:

1 hundred. 6 hundred.

5 hundred. 3 hundred.

9 hundred. 7 hundred.

We write 100 + 50 like this: /50. We write 100 + 5 like this: /05.

Write as single numbers:

Read:

Write in figures:

2 hundred 50. 5 hundred 6.

3 hundred 20. 7 hundred 8.

We write 300 + 40 + 2 like this: 342. Here are shown 342 splints.



Write as single numbers:

$$300+50+4$$
 $600+80+6$
 $400+30+2$ $700+60+8$
 $500+70+3$ $800+90+8$

Read:

270	560	346	923	408
275	567	481	744	607
375	867	696	527	706

Write in figures:

2	hundred	42 .	7	hundred	26.
5	hundred	87.	9	hundred	31.

The name for 10 hundred is one thousand.

We write 1 thousand like this: /000.

In this bundle there are 10 hundred splints, or 1000 splints.



We may count by thousands:

- 1 thousand, 1000,
- 2 thousand, 2000,
- 3 thousand, 3000,
- and so on.



Write in figures:

- 2 hundred 75. 3 hundred 33.
- 3 hundred 65. 5 hundred 67.
- 6 hundred 66. 7 hundred 55.
- 8 hundred 35. 9 hundred 90.
- 9 hundred 99. 1 thousand.

Here is an apple.

Here is an apple that has been cut in two.

Each part of the apple is half of it.

We write one half like this: ½

How many halves of an apple make
a whole apple?

How much is $\frac{1}{2}$ and $\frac{1}{2}$?

If I have $\frac{1}{2}$ of a pound of sugar, and put $\frac{1}{2}$ of a pound with it, how much sugar do I have?

How much is $\frac{1}{2}$ of a foot and $\frac{1}{2}$ of a foot? $\frac{1}{2}$ of a day and $\frac{1}{2}$ of a day? I see a circle.

I see $\frac{1}{2}$ of a circle.

2 halves of a circle make a circle.



Here are a dozen rabbits. If we take half of them away, how many rabbits do we take away?

How many are $\frac{1}{2}$ of a dozen?

How many are $\frac{1}{2}$ of 2 things?

How many are $\frac{1}{2}$ of 4 things?

How many inches in 1 foot?

How many inches in $\frac{1}{2}$ of 1 foot?

How many inches in $\frac{1}{2}$ of 8 inches?

In a class of 10 children, $\frac{1}{2}$ are boys.

How many boys are there?

In a room having 12 desks, $\frac{1}{2}$ are in one row. How many desks are there in this row?

This square has been cut into 4 equal parts.

14	1.
1/4	1/4

Each of these equal parts is one fourth of the square.

We write one fourth like this: $\frac{1}{4}$. We may call $\frac{1}{4}$ a quarter.

In the large square there are how many fourths? how many quarters?

How many fourths are there in $\frac{1}{2}$ of the large square?

I see $\frac{1}{2}$ of an apple.

I see $\frac{1}{4}$ of an apple.



I see $\frac{1}{2}$ of an apple, 2 quarters of an apple, and an apple.



I see a slice of melon.

I see a third of a slice of melon.

3 thirds of a slice make a whole slice.

We write one third like this: $\frac{1}{3}$.

How much is 1 + 1 + 1?

How much is $\frac{1}{3}$ of 3?

How much is 2+2+2?

How much is $\frac{1}{3}$ of 6?

How many 3's make 9?

How much is $\frac{1}{3}$ of 9?

Write and learn:

 $\frac{1}{3}$ of 3 is 1. $\frac{1}{2}$ of a dozen is 6.

 $\frac{1}{3}$ of 6 is 2. $\frac{1}{4}$ of a dozen is 3.

 $\frac{1}{3}$ of 9 is 3. $\frac{1}{3}$ of a dozen is 4.

We see these numbers on the clock:

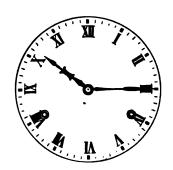
$$I = 1 \quad IV \text{ or } IIII = 4 \qquad VII = 7 \qquad X = 10$$

$$II = 2 \qquad V = 5 \qquad VIII = 8 \qquad XI = 11$$

$$III = 3 \qquad VI = 6 \qquad IX = 9 \qquad XII = 12$$

Read the numbers on this clock.

Can you tell what time it is now by the school clock?



Read:

Ι	\mathbf{VI}	\mathbf{II}	IV
\mathbf{V}	VII	XI	IX
\mathbf{X}	VIII	XII	III

Write the clock numbers for:

1.	7	2	9
5	6	12	4
10	8	11	3

How many are 1+1?

How many are 2 ones?

How many are 3 ones?

How many are 2 times 1?

How many are 3 times 1?

How many are 4 times 1?

We write

$$2 \times 1$$
 for 2 times 1, or $1 \div 1$.

$$3 \times 1$$
 for 3 times 1, or $1 + 1 + 1$.

$$4 \times 1$$
 for 4 times 1, or $1 + 1 + 1 + 1$.

Read and learn:

$$1 \times 1 = 1$$

$$2 \times 1 = 2$$

$$3 \times 1 = 3$$

$$4 \times 1 = 4$$

$$5 \times 1 = 5$$

$$6 \times 1 = 6$$

$$7 \times 1 = 7$$

$$8 \times 1 = 8$$

$$9 \times 1 = 9$$

$$10 \times 1 = 10$$

There are 5 boys. Each has 1 rose. How many roses have they all?

There are 4 men. Each has 1 hat.

How many hats have they all?

There are 6 girls. Each has 1 book.

How many books have they all?

There are 8 boys. Each has 1 coat. How many coats have they all?

Write:

$$3 \times / =$$
 $2 \times / =$ $6 \times / =$ $5 \times / =$ $9 \times / =$ $8 \times / =$ $7 \times / =$ $4 \times / =$ $4 \times / =$



How many blocks are 2 blocks and

2 blocks?

Then tell me how many blocks are

2 times 2 blocks.

How many blocks are 2 blocks and

2 blocks and 2 blocks?

Then tell me how many blocks are

3 times 2 blocks.

We write 3 times 2 like this:

$$3 \times 2 = 6$$

There are 2 boys. Each has 2 apples. How many apples have they both?

There are 3 girls. Each has 2 buns.

How many buns have they all?

There are 4 boys. Each has 2 caps. How many caps have they all?

How many blocks are 2×2 blocks? How many blocks are $\frac{1}{2}$ of 2 blocks? How many blocks are $\frac{1}{2}$ of 4 blocks? Count by 2's from 2 to 20.

How many are 4 twos? 5 twos?

Write and learn:

$$/ \times 2 = 2$$
 $6 \times 2 = /2$
 $2 \times 2 = 4$ $7 \times 2 = /4$
 $3 \times 2 = 6$ $8 \times 2 = /6$
 $4 \times 2 = 8$ $9 \times 2 = /8$
 $5 \times 2 = /0$ $/0 \times 2 = 20$

Count by 2's from 2 to 20.

How many 2's make 4?

How many 2's make 6?

How many 2's make 10?

How many 2's make 16?

I have a piece of ribbon 10 inches long. Into how many 2-inch pieces can I cut it?

If I wish to put a dozen roses in vases, putting 2 roses in each vase, how many vases shall I need?

How many inches are $\frac{1}{2}$ of 4 inches? How many pints are $\frac{1}{2}$ of 8 pints?

Write:

$$5 \times 2 =$$
 $2 \times 2 =$ $7 \times 2 =$ $3 \times 2 =$ $4 \times 2 =$ $9 \times 2 =$

Count by 3's from 3 to 15.

How many are 2 threes?

How many are 3 threes?

How many are 4 threes?

How many are 5 threes?

How many 3's do 3 3 3

you see in 6?

How many 3's do

3 3 3 3 3

How many 3's do

3 6 9 12 15

you see in 12?

How many 3's do you see in 15?

How much is $\frac{1}{2}$ of 6? $\frac{1}{2}$ of 12?

How much is $\frac{1}{3}$ of 6? $\frac{1}{3}$ of 9?

How much is $\frac{1}{3}$ of 12? $\frac{1}{3}$ of 15?

Write and learn:

$$/ \times 3 = 3 \qquad 3 \times 3 = 9 \qquad 5 \times 3 = /5$$
$$2 \times 3 = 6 \qquad 4 \times 3 = /2 \qquad 6 \times 3 = /8$$

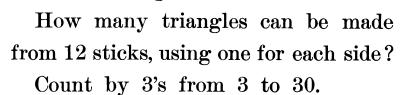
Frank's sister is 3 years old. Frank is 3 times as old. How old is he?

How many sides has a triangle?

George made 2 triangles,

using a stick for each side.

How many sticks did he use do for both triangles?



Write and learn:

$$/ \times 3 = 3$$
 $6 \times 3 = /8$
 $2 \times 3 = 6$ $7 \times 3 = 2/$
 $3 \times 3 = 9$ $8 \times 3 = 24$
 $4 \times 3 = /2$ $9 \times 3 = 27$
 $5 \times 3 = /5$ $/0 \times 3 = 30$

Three sticks are needed to make a triangle. How many sticks are needed to make 5 triangles?

If one notebook weighs 3 ounces, what will 6 notebooks weigh?

How many 3's make 9?

How much is $\frac{1}{3}$ of 6?

How much is $\frac{1}{3}$ of 9? $\frac{1}{3}$ of 12? How many blocks are $\frac{1}{3}$ of 9 blocks? $\frac{1}{3}$ of 12 blocks?

Write:

$$2 \times 3 =$$
 $5 \times 3 =$ $9 \times 3 =$ $3 \times 3 =$ $5 \times 3 =$ $7 \times 3 =$ $6 \times 3 =$ $4 \times 3 =$

$$3 + 3 + 3 + 3 + 3 = 4 \times 3 =$$

 $3 + 3 + 3 + 3 + 3 + 3 = 5 \times 3 =$



How many kittens are 4 kittens and 4 kittens?

How many kittens are 2×4 kittens?

fours and 1 four?

How many 4's do you see in 8? How many 4's do you see in 12? How many 4's do you see in 16? Count by 4's from 4 to 20.

Count by 4's from 20 to 40.

How many are 5 fours?

How many are 6 fours?

How many are 8 fours?

If Ralph makes 3 squares, using a stick for each side, how many sticks will he need in all?

How many squares can Ralph make from 8 sticks, using one stick for each side?

Write and learn:





These children are playing ringtoss. Each ring on the post counts 5. How much do 2 rings count? How much do 3 rings count? How much do 4 rings count? Count by 5's from 5 to 20.

How many days do you go to school in a week? in 4 weeks?

How many 5's do 5
you see in 15? 5 5
How many 5's in 20? 5 5 5
How many 5's in 25? 5 5 5 5
Count by 5's from $\frac{5}{5}$ $\frac{5}{10}$ $\frac{5}{15}$ $\frac{5}{20}$ $\frac{5}{25}$ 5 to 50.

How many days are 6×5 days?

Write and learn:

$$/ \times 5 = 5$$
 $6 \times 5 = 30$
 $2 \times 5 = /0$ $7 \times 5 = 35$
 $3 \times 5 = /5$ $8 \times 5 = 40$
 $4 \times 5 = 20$ $9 \times 5 = 45$
 $5 \times 5 = 25$ $/0 \times 5 = 50$

Write:

$$7 \times 5 = 4 \times 5 = 6 \times 5 = 8 \times 5 =$$

$$3 \times 5 = 2 \times 5 = 9 \times 5 = 10 \times 5 =$$

Multiply	by	2:
----------	----	----

3 pounds 3 quarts	3 tens 30	30 <u>2</u> 60
Multiply by 4:		20
2 yards	2 tens	4
2 inches	20	80

Multiply by 3:

4 feet	4 pints	4 tens
4 yards	4 inches	40

When we multiply 40 by 3, we say: " $3 \times 0 = 0$, $3 \times 4 = 12$," and we write 120.

$$2 \times 10$$
 3×20 4×30 5×30 2×50 3×50 4×40 5×40

Multiply by 2:

When we multiply 43 by 2, we say: " $2 \times 3 = 6$, $2 \times 4 = 8$," and we write the answer 86.

Write and multiply:

$$2 \times 2/$$
 $5 \times 1/$ $7 \times 2/$ $3 \times 2/$ 6×20 8×30 4×12 7×20 $9 \times 2/$ 22 23 24 12 $3/$ 60 $6/$ 3 2 2 3 4 5 5

If a triangle is 12 inches on a side, how far is it around the triangle?

If a square is 22 feet on a side, how far is it around the square?

How much is 3×2 ? 3×20 ?

How much is 3×20 and 3×2 ?

How much is 3×22 ?

See how we multiply

22 by 3.

• •			$T \cdot g$.				
10	//	12	/3	14	20	21	22
	_2						
23	24	30	3/	32	33	34	40
	_2						
41	42	43	44	//	12	/3	20
	<u>2</u>						
21	23	30	3/	32	33	//	12
3	3	3	3	3	3	4	4

How much is 3×3 ?

How much is 3×4 ? 3×40 ?

How much is 3×43 ?

See how we multiply

43 by 3.

	<i>~</i> /						
<i>50</i>	5/	52	53	40	41	42	50
<u>2</u>	_2	_2	_2	<i>3</i> —	<i>3</i> .	<i>3</i>	3
20	21	22	30	3/	32	40	41
4	<u>4</u>	<u>4</u>	<u>4</u>	4	.4	<u>4</u>	4
10	//	20	21	.30	3/	40	41
<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>5</u>
10	//	20	2/	4/	51	51	51
<u>6</u>	6	6	6	6	_7	8	9

How much is 2×3 ? 2×30 ? How much is 2×30 and 2×3 ? How much is 2×33 ? 2×32 ? How much is 3×1 ? 3×10 ? How much is 3×12 ?

Write	and	add	
** 1 W	unu	uuu	•

23	34	41	93	33	52	61	82
62	23	52	4	41	32	26	10
		3	_2 	<u>4</u>	<u>5</u>	_2 	
3	2	3	4	5	8	3	6
		/					
8		9					
23	13	24	42	34	62	83	91
/2	32	<i>41</i>	42	44	2 <i>b</i>	<u> 15</u>	8

Write and subtract:

48	29	37	64	58	75	89	96
27	/2	2/	40	32	<i>43</i> —	54	72
					74		
					22		

	See	how	we	add	larger	numbers
--	-----	-----	----	-----	--------	---------

	much i			223 172
	much i			395
How	much i	s 223 +	172?	
Write	and add:			
100	120	/23	123	1.23
200	<u> 200</u>	200	2/0	2/4
221	342	426	535	683

How many feet are 125 feet and 42 feet? 342 feet and 135 feet?

See how we add other numbers.

How much is $8+4$?	24
How much is $6+2$?	<u>68</u>
We say: " $8 + 4 = 12$,"	12
and we write 2. Then	<u>8</u> 92
we say: " $1 + 6 + 2 = 9$,"	24
and we write 9.	68
How much is 24 + 68?	92

Write and add:

How many boys are 18 boys and 16 boys? 37 boys and 25 boys?

Add 18 cubes and 2 cubes.

How many houses are 17 houses and 16 houses?

How many girls are 48 girls and 27 girls? 52 girls and 18 girls?

How many birds are 28 birds and 32 birds? 35 birds and 48 birds?

28	36	48	72	63	49	68	36
<u>27</u>	<i>54</i>	<u>29</u>	<u>/8</u>	<u> 19</u>	<i>32</i>	/ <i>5</i>	<u>27</u>
36	81	27	46	55	73	38	46
26	<u>29</u>	<i>38</i> —	<u>27</u>	<i>35</i> —	<u>19</u>	<u>26</u>	<u> 29</u>
52	57	63	91	83	58	37	66
29	33	29	9	8	29	37	28

Let us subtract larger numbers.

How	much	is	5 -	2?		3 95
How	much	is	9 –	7?		172
How	much	is	3 –	1?		223
***	4.3		30 F	4.5 0	000	

We see that 395 - 172 = 223.

How many feet are 275 feet less 25 feet? 275 feet less 125 feet?

Write	and subtra	ct:		
600	640	648	648	648
200	200	200	220	225
429	536	807	609	707
107	205	402	305	202
547	682	936	439	822
142	261	3/4	208	410

From 45 cubes take 30 cubes.

How many miles are 65 miles less 60 miles? 265 miles less 160 miles?

How many feet are 136 feet less 25 feet? 336 feet less 125 feet?

How many pounds are 255 pounds less 140 pounds?

Write o	und subtra	ct:			
528	732	698	496	32/	
206	302	427	343	201	
339	489	687	926	559	
206	227	342	515	233	
578	692	891	307	558	
227	341	620	106	258	

The complete addition table is inserted for purposes of review and reference.

In schools where the entire multiplication table is taught before taking up a formal textbook, the following table may be used.

$1 \times 2 = 2$	$1 \times 3 = 3$	$1 \times 4 = 4$	$1 \times 5 = 5$
$2 \times 2 = 4$	$2 \times 3 = 6$	$2 \times 4 = 8$	$2 \times 5 = 10$
$3 \times 2 = 6$	$3 \times 3 = 9$	$3\times 4=12$	$3\times 5=15$
$4 \times 2 = 8$	$4\times 3=12$	$4\times 4=16$	$4\times 5=20$
$5 \times 2 = 10$	$5 \times 3 = 15$	$5 \times 4 = 20$	$5\times 5=25$
$6 \times 2 = 12$	$6 \times 3 = 18$	$6 \times 4 = 24$	$6\times 5=30$
$7 \times 2 = 14$	$7\times3=21$	$7\times 4=28$	$7\times5=35$
$8 \times 2 = 16$	$8 \times 3 = 24$	$8\times 4=32$	$8 \times 5 = 40$
$9 \times 2 = 18$	$9\times 3=27$	$9 \times 4 = 36$	$9\times 5=45$
$10 \times 2 = 20$	$10 \times 3 = 30$	$10 \times 4 = 40$	$10 \times 5 = 50$
$1 \times 6 = 6$	$1 \times 7 = 7$	$1 \times 8 = 8$	$1 \times 9 = 9$
$2 \times 6 = 12$	$2 \times 7 = 14$	$2 \times 8 = 16$	$2\times9=18$
$3\times 6=18$	$3\times7=21$	$3\times 8=24$	$3\times9=27$
$4\times 6=24$	$4\times7=28$	$4\times8=32$	$4\times9=36$
$5 \times 6 = 30$	$5\times7=35$	$5 \times 8 = 40$	$5\times9=45$
$6 \times 6 = 36$	$6\times7=42$	$6\times8=48$	$6\times9=54$
$7 \times 6 = 42$	$7\times7=49$	$7\times8=56$	$7\times9=63$
$8 \times 6 = 48$	$8 \times 7 = 56$	$8 \times 8 = 64$	$8\times 9=72$
$9\times 6=54$	$9 \times 7 = 63$	$9 \times 8 = 72$	$9\times9=81$
$10 \times 6 = 60$	$10 \times 7 = 70$	$10 \times 8 = 80$	$10 \times 9 = 90$

