

**ARITHMETIC BY GRADES
FOR INDUCTIVE TEACHING,
DRILLING AND TESTING,
BOOK NUMBER ONE**

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Arithmetic by Grades for Inductive Teaching, Drilling and Testing, Book Number One by John T. Prince

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JOHN T. PRINCE

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ARITHMETIC BY GRADES

FOR INDUCTIVE TEACHING, DRILLING
AND TESTING

BOOK NUMBER ONE

Numbers from 1 to 20

PREPARED UNDER THE DIRECTION OF
JOHN T. PRINCE

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NOTE TO TEACHERS.

THIS book is intended for the use of pupils of the first or second school year and is designed to accompany and follow teaching by objects. The illustrations are intended to give a graphic and orderly representation of what has been taught and to serve as models for the pupils in the solution of problems. They also indicate the kind of drawings which pupils may make at their seats upon slate or paper.

While the book is designed to embrace a year's work, some pupils and classes may be able to do in less time all that is needed to be done in the development and applications of numbers to twenty. It is believed that the number and variety of problems are so great as to avoid the necessity of giving many exercises for drill on the black board. Teachers may find it well to select exercises that their pupils most need.

The exercises are numbered without reference to what may be needed for a lesson. They are given as a guide in assigning lessons and in hearing recitations.

For methods of teaching and of using this book, see Teachers' Manual which is designed to accompany all books of the series.

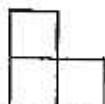
SECTION I.

NUMBERS FROM 1 TO 10

EXERCISE 1.



3



$2+1=3$

$1+2=3$

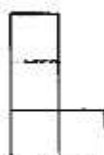
$3-1=2$

$3-2=1$

$3 \div 2 = 1 \text{ (r) } 1$



4



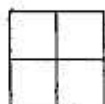
$3+1=4$

$1+3=4$

$4-1=3$

$4-3=1$

$4 \div 3 = 1 \text{ (r) } 1$



$2+2=4$

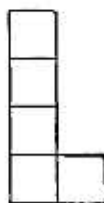
$2 \times 2 = 4$

$4-2=2$

$4 \div 2 = 2$



5



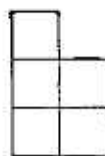
$4+1=5$

$1+4=5$

$5-1=4$

$5-4=1$

$5 \div 4 = 1 \text{ (r) } 1$



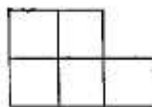
$3+2=5$

$2+3=5$

$5-2=3$

$5-3=2$

$5 \div 2 = 2 \text{ (r) } 1$



$2+2+1=5$

$2 \times 2 + 1 = 5$

$5-2-2=1$

$5 \div 2 = 2 \text{ (r) } 1$

Copy and complete :

3 squares and 1 square are 4 squares.

4 squares less 3 squares are 1 square. ✕

3 squares are 2 more than 1 square.

2 squares and 2 squares are 4 squares. ✕

2 times 2 squares are 4 squares

$\frac{1}{2}$ of 4 squares is 2 squares.

2 squares in 4 squares 2 times.

4 squares and 1 square are 5 squares.

3 squares and 2 squares are 5 squares.

5 squares less 2 squares are 3 squares. ✕

$$1 + 4 = ?$$

$$5 - 1 = ?$$

$$2 + 3 = ?$$

$$5 - ? = 4$$

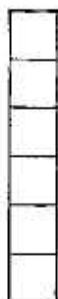
$$5 - ? = 1$$

$$5 - 2 = ?$$

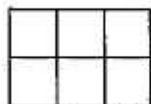
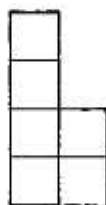
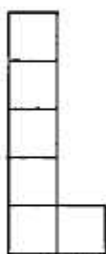
$$3 + ? = 5$$

$$5 \div 4 = ?$$

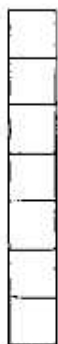
$$5 \div 2 = ?$$



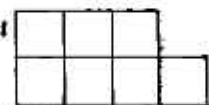
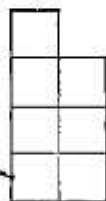
6



$$\begin{array}{l}
 5+1=6 \quad 4+2=6 \quad 3+3=6 \quad 2+2+2=6 \\
 1+5=6 \quad 2+4=6 \quad 3 \times 2=6 \quad 2 \times 3=6 \\
 6-1=5 \quad 6-2=4 \quad 6-3=3 \quad 6-2-2-2=0 \\
 6-5=1 \quad 6-4=2 \quad 6-3=3 \quad 6-2=3 \\
 6 \div 5 = 1 \text{ r } 1 \quad 6 \div 4 = 1 \text{ r } 2 \quad 6 \div 3 = 2 \quad 6 \div 2 = 3
 \end{array}$$



7



$$\begin{array}{l}
 6+1=7 \quad 5+2=7 \quad 4+3=7 \quad 2+2+2+1=7 \\
 1+6=7 \quad 2+5=7 \quad 3+4=7 \quad 2 \times 3+1=7 \\
 7-1=6 \quad 7-2=5 \quad 7-3=4 \quad 7-2-2-2=1 \\
 7-6=1 \quad 7-5=2 \quad 7-4=3 \quad 7 \div 2 = 3 \text{ r } 1 \\
 7 \div 6 = 1 \text{ r } 1 \quad 7 \div 5 = 1 \text{ r } 2 \quad 7 \div 4 = 1 \text{ r } 3
 \end{array}$$

Copy and complete :

6 squares less 2 squares are — squares.

3 squares and 3 squares are — squares.

2 times 3 squares are — squares.

$\frac{1}{2}$ of 6 squares is — squares.

3 squares in 6 squares. — times.

2 squares and 2 squares and 2 squares
are — squares. $2 \times 3 = ?$

2 squares and 5 squares are — squares.

7 squares less 5 squares are — squares.

4 squares in 7 squares — times and —
left over. $7 \div 4 = ?$

$$3 \times 2 = 6$$

$$3 + 4 = ?$$

$$7 + 3 = ?$$

$$6 + 2 = ?$$

$$7 - 3 = ?$$

$$7 + 2 = ?$$