

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

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649498703

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

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

JOHN T. PRINCE

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

ARITHMETIC BY GRADES

FOR INDUCTIVE TEACHING, DRILLING
AND TESTING

BOOK NUMBER TWO

Numbers from 1 to 100

DEPARTMENT OF EDUCATION
LELAND STANFORD JUNIOR UNIVERSITY

PREPARED UNDER THE DIRECTION OF
JOHN T. PRINCE

BOSTON, U.S.A.
GINN & COMPANY, PUBLISHERS
1899

615 J 13

C

COPYRIGHT, 1933,

BY JOHN T. PRINCE.

ALL RIGHTS RESERVED.

The Athenæum Press

GINN & COMPANY, BOSTON, U.S.A.

NOTE TO TEACHERS.

THE work of this book includes operations with numbers to 100 and is designed for pupils of the second or third school year. Three distinct purposes have been kept in mind in preparing the exercises, (1) to furnish illustrations by which pupils may have a good idea of numbers and of the operations and relations of numbers, (2) to present by easy grades the numerical operations so that they may be understood and performed by the pupils without direct assistance, (3) to present a large number of exercises for drill, and thus avoid the necessity of the teacher's writing out the drill lessons on the black-board. Black-board lessons are objectionable not only on account of a waste of the teacher's time and strength but also on account of the injury done to pupils' eyes in much reading and copying from the black-board.

It may not be necessary for all the exercises to be given to insure thoroughness, but in selecting exercises for practice it would be well to follow the order indicated. Whenever it is found that a process is not understood or is not readily performed the pupils should be taken back to processes which are understood and which can be performed readily and then should be led forward by easy steps until the desired end is reached.

The exercises are not intended to indicate the amount which should be given for a single lesson. They are intended to be used simply as a guide in giving out lessons and in conducting recitations.

For suggestions and directions in using this book, teachers are referred to the Manual for teachers which is designed to accompany all books of the series.

CONTENTS.

SECTION	PAGES
I. Numbers from 1 to 20 (Review)	1-11
II. Development of numbers to 100. First steps in Addition and Subtraction	12-31
III. Addition and Subtraction. Units added to and subtracted from numbers consisting of tens and units	32-46
IV. Multiplication and Division with multipliers and divisors to 10. Fractional parts of numbers. Reviews and applications in common weights and measures	47-73
V. Previous work extended in adding, subtracting, multiplying by, and dividing by numbers beyond 10	74-90
VI. Miscellaneous exercises for application and Review	91-103

SECTION I.

NUMBERS FROM 1 TO 20. (REVIEW.)

EXERCISE 1.

Add at sight:

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

EXERCISE 2.

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

EXERCISE 3.

- Eight cards less six cards are — cards.
- Nine books and seven books are — books.
- Fifteen sleds less nine sleds are — sleds.
- Seven oranges and eight oranges are — oranges.
- Thirteen nails less ten nails are — nails.
- Sixteen cents less twelve cents are — cents.
- Eight clocks and ten clocks are — clocks.
- Twenty nuts less six nuts are — nuts.
- Fourteen ships and six ships are — ships.
- Twenty stoves less eight stoves are — stoves.

1. In one quart there are — pints.
2. In five quarts there are — pints.
3. In six quarts there are — pints.
4. In ten quarts there are — pints.
5. In four quarts there are — pints.
6. In nine quarts and a pint there are — pints.
7. In seven quarts and a pint there are — pints.
8. In one gallon there are — quarts.
9. In five gallons there are — quarts.
10. In three gallons and a quart there are — quarts.
11. In four gallons and two pints there are — quarts.
12. At three cents a pint, two pints, or one quart, of milk will cost — cents.
13. At two cents a pint, two quarts of milk will cost — cents.
14. At four cents a pint, two quarts of milk will cost — cents.
15. If one quart of milk costs five cents, one gallon, or four quarts, will cost — cents.
16. A quart is — times as much as a pint.
17. A gallon is — times as much as a quart.
A pint is — — of a quart.