

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

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

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**JOHN T. PRINCE**

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# ARITHMETIC BY GRADES

FOR INDUCTIVE TEACHING, DRILLING  
AND TESTING

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BOOK NUMBER TWO

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*Numbers from 1 to 100*

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PREPARED UNDER THE DIRECTION OF  
JOHN T. PRINCE

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## NOTE TO TEACHERS.

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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.

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## SECTION I.

### NUMBERS FROM 1 TO 20. (REVIEW.)

#### EXERCISE 1.

Add at sight:

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

<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.