GRADUAL LESSONS

IN

ORAL AND WRITTEN

ARITHME IC.

PART I.

BY

DAVID B. TOWER, A. M.

AUTHOR OF "INTELLECTUAL ALGEBRA," &c.

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ARITHMETIC.

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PART I.

THOUGHT COMBINED WITH PRACTICE.

TAKE THE FIRST STEP RIGHT.

By DAVID B. TOWER, A. M.,

AUTHOR OF "INTELLECTUAL ALGEBRA, OR ORAL EXER-
CISES IN ALGEBRA, FOR COMMON SCHOOLS," &c.

BOSTON:

TAPPAN, WHITTEMORE & MASON.

1850.

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Putnam's Arithmetic.

THE AMERICAN COMMON SCHOOL ARITHMETIC; in which the Principles of the Science are fully explained and applied to the Solution of a great Variety of Practical Examples. Designed for the Use of Common Schools and Academies. By RUFUS PUTNAM, Principal of the Bowditch High School, Salem, Mass.

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GEORGE

PREFACE.

FROM a trial, in the younger department of the author's school, of various methods of teaching numbers, experience has given a decided preference to the plan developed in this little book. The details are full, because it has been found, in actual practice, best that they should be so. Each step, which the pupil is called to take, should not only be a distinct step, but should be taken understandingly; otherwise habits of mind will result, seriously impeding true progress in other branches of study.

In the higher studies, first a *proposition* is announced, and then the *reasoning* is given which demonstrates its truth; a *fact* is stated, and then the *proof* adduced which establishes it. The philosophy of this is not questioned, but its application has been restricted; it has seldom been duly weighed in preparing text-books for a *child*.

In this book, first a STATEMENT is made of a simple truth; then the truth is illustrated by EXAMPLES, showing its application to objects; from these examples the INFERENCE is deduced of its universal application. Next, practical QUESTIONS, involving a simple process of reasoning, are asked, to exercise the understanding; then questions in *numbers alone*, to test the memory.

This mode of introducing a child to the study of numbers, and to a clear comprehension of their changes, has

appeared so *rational* to eminent teachers, and other friends of education, who have observed its results, that they have strongly urged the publication of this work.

Again, an unemployed child is unhappy and consequently troublesome; it is best then to give him sufficient and suitable employment; for this purpose, a *slate* and *pencil* should be put into his hands as soon as he enters the school-room.

In this book, *manuscript figures* are given for the pupil to imitate; and his first lesson in numbers he is also required to perform on the slate; this he must do with each succeeding lesson. Thus the pupil gets employment, pleasing and useful employment. The eye is gradually educated, the fingers trained, memory aided, processes are learned, and the pupil advances willingly and pleasantly on a road, over which he must some time travel, and which is often travelled without due preparation.

This book contains Tables of Weights, Measures, &c., and abstract examples sufficient to teach the processes of Numeration, Addition, Subtraction, Multiplication, and Division. These processes should be thoroughly understood before the pupil is called upon to apply them in solving *practical* questions.

The book may be used to precede any written Arithmetic, or Colburn's First Lessons; and it contains about as much as can be profitably learned in our Primary Schools.

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D. B. T.

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Park Street, *Nov.* 18, 1848.

GRADUAL LESSONS

IN

ARITHMETIC.

ADDITION. Section. I.

STATEMENT. 1 and 1 are 2 ; to be read, *one* and *one* are *two*.

Example **1.** 1 thumb and 1 thumb are 2 thumbs.

2. 1 apple and 1 apple are 2 apples.

3. 1 horse and 1 horse are 2 horses.

Inference. Then *any* thing and *one* more thing of the same kind are *two* things of the same kind.

QUESTION **1.** How many books are 1 book and 1 book ?

2. How many units are 1 unit and 1 unit ?

3. How many feet are 1 foot and 1 foot ?

4. Charles has made 1 mark on his slate, if he makes another, how many marks will there be ?

1 *

STAT. 2 and 1 are 3; to be read, *two* and *one* are *three*.

Ex. **1.** 1 finger and 1 finger and 1 finger are 3 fingers.

2. 2 fingers and 1 finger are 3 fingers.

3. 1 unit and 2 units are 3 units.

Inf. Then *any* thing and *two* more things of the same kind make *three* things of the same kind; or *two* things and *one* more, are *three* things.

QUES. 1. 1 apple and 1 apple and 1 apple are how many apples?

2. How many books are 1 book and 2 books?

3. 1 finger and 2 fingers are how many?

4. Charles has 2 pencils; if I give him one more, how many will he have?

5. 1 and 1 and 1 are how many?

6. 1 and 2 are how many?

EXERCISES FOR THE SLATE.

Zero.	One.	Two.	Three.
0.	*1.*	*2.*	*3.*
add *1* apple	*1* book	*2* units	
and *1* apple	*2* books	*1* unit	
apples	books	units	

SUBTRACTION. SECT. 1.

STAT. 1 from 1 leaves 0; to be read, *one* from *one* leaves *nothing*. 1 from 2 leaves 1; read thus, *one* from *two* leaves *one*.

Ex. **1.** When you have only 1 apple in your hand, if the apple is taken away, no apple will be left in your hand.

2. When 2 books are on your desk, if only 1 book is taken away, 1 book will remain.

3. When 1 apple is taken from 2 apples, 1 apple remains.

4. Make two marks on your slate; now rub out both of them, and no marks will be left.

Inf. Where there is but *one* thing of a kind, if that *one* thing is taken away, *nothing* of the same kind will remain. From any *two* things of the same kind, if only *one* is taken, *one* thing will remain; if *two* are taken, *nothing* will be left.

QUES. **1.** 1 book from 1 book leaves what?

2. 1 book from 2 books leaves how many?

3. 1 unit from 2 units leaves how many?

4. A farmer had two horses; he sold one of them; how many horses had he left?

STAT. 1 from 3 leaves 2 ; read, *one* from *three* leaves *two.*   2 from 3 leaves 1 ; read, *two* from *three* leaves *one.*

Ex. 1. When 1 book is taken from 3 books, 2 books remain.

2. When 2 fingers are taken from 3 fingers, 1 finger remains.

3. 1 apple taken from 3 apples, leaves 2 apples.

Inf. From any *three* things of a kind, when *one* thing is taken, *two* things of the same kind will remain ; when *two* things are taken, *one* will remain.

Ques. 1. 3 fingers are on your book ; take one finger away, how many will remain ?

2. If you take 1 book and 1 book from 3 books, what will remain ?

3. 1 from 3 leaves how many ?

4. 1 and 1 from 3 leaves how many ?

5. 2 from 3 leaves how many ?

EXERCISES FOR THE SLATE.

from *3 apples*	from *2 books*	from *3 horses*
take *2 apples*	take *1 book*	take *1 horse*
leaves *apples*	leaves *book*	leaves *horses*

ADDITION. Sect. II.

STAT. 3 and 1 are 4; to be read, *three* and *one* are *four.*

Ex. **1.** 1 finger and 1 finger and 1 finger and 1 finger, are 4 fingers.

2. 2 apples and 1 apple and 1 apple are 4 apples.

3. 3 books and 1 book are 4 books.

4. 2 horses and 2 horses are 4 horses.

5. 1 finger and 3 fingers are 4 fingers.

Inf. Then *any* thing and *three* more things of the same kind, or *two* things and *two* more, or *three* things and *one* more, make *four* things of the same kind.

QUES. **1.** 1 book and 1 book and 1 book and 1 book are how many books?

2. 2 fingers and 1 finger and 1 finger are how many fingers?

3. 2 pencils and 2 pencils are how many pencils?

4. 3 boys and 1 boy are how many boys?

5. Charles had 1 pear, and Anna gave him 3 more; how many pears had he then?

6. 1 and 1 are how many? 2 and 1 are how many?

7. 3 and 1 are how many? 2 and 2 are how many?

8. 1 and 2 are how many? 1 and 3 are how many?

EXERCISES FOR THE SLATE.

Zero.	One.	Two.	Three.	Four.
0.	*1.*	*2.*	*3.*	*4.*

1 finger	*1 hat*	*2 boys*
1 finger	*2 hats*	*1 boy*
1 finger	*1 hat*	*1 boy*
fingers	*hats*	*boys*

SUBTRACTION. Sect. II.

STAT.   1 from 4 leaves 3; read, *one* from *four* leaves *three.*

Ex. **1.** Place 4 fingers on your desk; take away 1 finger, and 3 fingers will remain.

2. 1 apple from 4 apples leaves 3 apples.

3. 1 book and 1 book from 4 books leaves 2 books.

4. 2 horses from 4 horses leaves 2 horses.

5. 1 hat and 1 hat and 1 hat from 4 hats leaves 1 hat.

6. 3 boys from 4 boys leaves 1 boy.

Inf. From any *four* things of a kind, if only *one* thing is taken, *three* things of a kind will remain ; if *two* things are taken, *two* will remain ; or if *three* things are taken, only *one* will remain.   •

QUES. **1.** 1 cap from 4 caps leaves how many ? .

2. 1 finger and 1 finger from 4 fingers leaves how many ?

3. 2 boys from 4 boys leaves how many ?

4. 1 unit and 1 unit and 1 unit from 4 units leaves how many?

5. 3 apples from 4 apples leaves how many ?

6. Charles had 4 apples ; he ate 1 ; how many apples had he left ?

7. Anna has 4 books ; if she gives 1 to Charles and 1 to George, how many will she have left ?

8. George had 4 pencils, but he lost 3 of them ; what has he left ?

9. 1 from 4 leaves how many ? 2 from 4?

10. 1 from 2 leaves how many ? 1 from 3 ? 2 from 3 ? 4 from 4 ?

EXERCISES FOR THE SLATE.

from *4 balls*	from *4 whips*	from *4 units*
take *1 ball*	take *2 whips*	take *3 units*
leaves *balls*	leaves *whips*	leaves *unit*

ADDITION.   Sect. III.

STAT.   4 and 1 are 5 ; read, *four* and *one* are *five*.

Ex. **1.** 1 hat and 1 hat and 1 hat and 1 hat and 1 hat are 5 hats.

2. 2 boys and 1 boy and 1 boy and 1 boy are 5 boys.

3. 3 apples and 1 apple and 1 apple are 5 apples.

4. 4 fingers and 1 finger are 5 fingers.

5. 2 horses and 3 horses are 5 horses.

6. 1 ring and 4 rings are 5 rings.

Inf.   Then *any* thing and *four* more things of the same kind ; or *two* things and *three* more ; or *four* things and *one* more make *five* things of the same kind.

QUES. **1.** 1 boy and 1 boy and 1 boy and 1 boy and 1 boy are how many boys ?

2. 1 hat and 1 hat and 1 hat and 2 hats are how many hats ?

3. 1 pen and 1 pen and 3 pens are how many pens ?

4. 1 finger and 4 fingers are how many fingers ?

5. 3 horses and 2 horses are how many horses ?

6. Charles has 4 apples; if I give him 1 more, how many will he have?

7. 1 and 1 are how many? 2 and 1? 3 and 1? 4 and 1? 2 and 3? 1 and 4?

8. 1 and 2 are how many? 1 and 3?

EXERCISES FOR THE SLATE.

Zero.	One.	Two.	Three.	Four.	Five.
0.	*1.*	*2.*	*3.*	*4.*	*5.*

1 unit		*2* horses		*2* fingers
4 units		*2* horses		*3* fingers
———		———		———
units		horses		fingers

SUBTRACTION. Sect. III.

STAT. 1 from 5 leaves 4; read, *one* from *five* leaves *four.*

Ex. **1.** Place 5 fingers on your desk; now take 1 finger away, and 4 fingers remain.

2. Make 5 marks on your slate; now rub out 1 mark, and 4 marks are left.

3. From 5 apples, take 1 apple and 1 apple, and 3 apples will remain.

4. Take 3 horses from 5 horses, and 2 horses remain.

5. 4 books from 5 books leaves 1 book.

Inf. From any *five* things of a kind, take *one* thing, and *four* of a kind remain; take *two*, and *three* remain; take *three*, and *two* remain; take *four*, and *one* remains; or take *five*, and *nothing* is left.

Ques. **1.** 2 fingers from **5** fingers leaves how many?

2. 4 boys from 5 boys leaves how many?

3. 1 horse from 5 horses leaves how many?

4. 3 men from 5 men leaves how many men?

5. 2 hats and 1 hat from 5 hats leaves how many?

6. 2 caps and 2 caps from 5 caps leaves how many?

7. James had 5 chestnuts; he gave 3 to Jane, how many had he left?

8. 1 from 5 leaves how many? 2 from 5? 3 from 5? 4 from 5? 5 from 5?

9. 2 and 1 from 5 leaves how many? 2 and 2 from 5? 1 and 1 and 2 from 5? 1 and 3 from 5?

EXERCISES FOR THE SLATE.

from 5 books	from 5 marks	from 5 pins
take 2 books	take 4 marks	take 3 pins
leaves books	leaves mark	leaves pins

ADDITION. Sect. IV.

STAT. 5 and 1 are 6; read, *five* and *one* are *six*.

Ex. 1. 5 fingers and 1 finger are six fingers.

2. 1 orange and 5 oranges are six oranges.

3. 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit are 6 units.

4. 2 fingers and 2 fingers and 2 fingers are 6 fingers.

5. 3 men and 3 men are 6 men.

6. 2 cows and 4 cows are 6 cows.

Inf. Then *any* thing and *five* more things of the same kind; or *two* things and *four* more; or *three* things and *three* more; or *four* things and *two* more; or *five* things and *one* more, make *six* things of the same kind.

QUES. 1. 1 top and 1 top and 1 top and 3 tops are how many tops?

2. 1 pail and 1 pail and 4 pails are how many pails?

3. 1 finger and 5 fingers are how many fingers?

4. Anna gave me 3 pins, Jane gave me 1, and Mary gave me 2; how many pins did they all give me?

5. 1 and 1 and 1 and 1 and 1 and 1 are how many; 2 and 1? 3 and 1? 4 and 1? **5** and 1?

6. 2 and 2 are how many? 2 and 4? 1 and 2 and 3? 2 and 2 and 2? 3 and 3?

7. 1 and 4 and 1 are how many?

III   **EXERCISES FOR THE SLATE.**

One.	Two.	Three.	Four.	Five.	Six
1.	*2.*	*3.*	*4.*	*5.*	*6.*

3 feet		*4 inches*		*2 miles*
3 feet		*2 inches*		*3 miles*
feet		*inches*		*miles*

SUBTRACTION. Sect. IV.

Stat. 1 from 6 leaves 5; read, *one from six* leaves *five.*

Ex. **1.** When you take 1 finger from 6 fingers, 5 fingers remain.

2. Make 6 marks on your slate ; then rub out 1, and 5 marks will be left.

3. 2 fingers from 6 fingers leaves **4** fingers.

4. From 6 pins take 2 pins and 1 pin, then 3 pins will be left.

5. Take 4 apples from 6 apples, and 2 apples remain.

6. From 6 horses take 5 horses, and 1 horse will remain.

Inf. From any *six* things of a kind, when only *one* thing is taken, *five* things of a kind remain ; when *two* are taken, *four* remain ; when *three* are taken, *three* remain ; when *four* are taken, *two* remain ; when *five* are taken, *one* remains ; and when *six* are taken, *nothing* is left.

Ques. 1. Take 1 horse from 6 horses, how many will remain ?

2. 3 fingers from 6 fingers leaves how many ?

3. 2 horses from 6 horses leaves how many ?

4. Take 2 pins and 2 pins from 6 pins, how many pins will be left ?

5. 3 units and 2 units from 6 units leaves how many ?

6. Make 6 marks on your slate, and rub out 4 of them, how many will be left ?

7. 6 horses were in a stable ; when 3 of them went out, how many remained in the stable ?

8. 1 from 6 leaves how many ? 4 from 6 ? 2 from 6 ? 5 from 6 ? 3 from 6 ?

9. 2 from 5 leaves how many? 4 from 5? 1 from 5? 3 from 5? 2 from 4?

10. 2 and 3 from 6 leaves how many? 1 and 4 from 6? 2 and 2 from 6?

EXERCISES FOR THE SLATE.

from *6* inches	from *6* feet	from *6* pins
take *2* inches	take *4* feet	take *3* pins
leaves *inches*	leaves *feet*	leaves *pins*

from *6*	from *5*	from *4*	from *5*	from *6*
take *5*	take *2*	take *3*	take *4*	take *6*

ADDITION. SECT. V.

STAT. 6 and 1 are 7; read, *six* and *one* are *seven*.

Ex. **1.** 6 fingers and 1 finger are 7 fingers.

2. 1 pin and 1 pin and 1 pin and 1 pin and 1 pin and 1 pin and 1 pin are 7 pins.

3. 5 apples and 2 apples are 7 apples.

4. 4 horses and 3 horses are 7 horses.

5. 3 hens and 4 hens are 7 hens.

6. 1 cow and 6 cows are 7 cows.

Inf. Then *any* object and *six* more objects of the same kind; or *two* and *five* more; or *three* and *four* more; or *four* and *three* more; or *five* and *two* more; or *six* and *one* more, make seven objects of a kind.

Ques. 1. 1 unit and 6 units are how many?

2. 2 miles and 5 miles are how many?

3. 2 men and 1 man and 4 men are how many men?

4. 3 pins and 2 pins and 2 pins are what?

5. 6 feet and 1 foot are how many?

6. Charles had 3 books, Anna 1, George 2, and Mary 1; how many had they all?

7. 2 and 1 are how many? 2 and 3? 2 and 5? 2 and 2? 2 and 4? 3 and 1?

8. 3 and 3 are how many? 3 and 2? 3 and 4? 4 and 1? 4 and 3? 4 and 2?

9. 5 and 1 are how many? 5 and 2? 6 and 1? 2 and 2 and 2? 2 and 3 and 2?

EXERCISES FOR THE SLATE.

One.	Two.	Three.	Four.	Five.	Six.	Seven.
1.	*2.*	*3.*	*4.*	5.	*6.*	*7.*

2 cats	*2 dogs*	*1 book*
2 cats	*1 dog*	*2 books*
3 cats	*4 dogs*	*3 books*
cats	*dogs*	*books*

SUBTRACTION. Sect. V.

Stat.   1 from 7 leaves 6; read, *one* from *seven* leaves *six*.

Ex. **1.** When you take 1 finger from 7 fingers, 6 fingers remain.

2. Make 7 marks on your slate, then rub out 1, and 6 marks will be left.

3. 2 fingers from 7 fingers leaves 5 fingers.

4. From 7 apples take 3 apples, and 4 apples will be left.

5. Take 5 pins from 7 pins, and 2 pins remain.

6. 6 books from 7 books leaves 1 book.

Inf. From any *seven* objects of a kind, take *one* object, and *six* of a kind remain; take *two,* and *five* remain; take *three,* and *four* remain; take *four,* and *three* remain; take *five,* and *two* remain; take *six,* and *one* remains; take *seven,* and *nothing* is left.

Ques. 1. Take 1 book from 7 books, how many will be left?

2. 2 fingers from 7 fingers leaves how many?

3. 3 sheep from 7 sheep leaves how many?

4. 5 boys from 7 boys leaves how many?

5. 7 apples from 7 apples leaves how many?

6. 4 men from 7 men leaves how many?

7. 6 units from 7 units leaves how many?

8. Anna had 7 oranges, and gave 4 of them to Charles; how many had she left?

9. George made 7 marks on his slate, but Charles rubbed out 2 of them; how many marks remained?

10. 1 from 7 leaves how many? 3 from 7? 5 from 7? 2 from 7? 4 from 7?

11. 1 from 6 leaves how many? 5 from 6? 3 from 6? 6 from 6? 2 from 6? 4 from 6?

12. 1 from 5 leaves how many? 4 from 5? 2 from 5? 3 from 5? 6 from 7? 7 from 7?

13. 1 from 4 leaves how many? 3 from 4? 6 from 6? 2 from 4? 2 and 2 and 2 from 7?

14. 3 and 2 from 7 leaves how many? 5 and 2 from 7? 2 and 4 from 7? 2 and 1 from 6?

EXERCISES FOR THE SLATE.

from 7 pins	from 7 marks	from 7 hats
take 2 pins	take 5 marks	take 3 hats
leaves pins	leaves marks	leaves hats

from 7	from 7	from 7	from 6	from 5
take 1	take 4	take 7	take 4	take 2

ADDITION. Sect. VL

STAT.   7 and 1 are 8; read, *seven* and *one* are *eight.*

Ex. **1.** 7 fingers and 1 finger are 8 fingers.

2. 1 mark and 7 marks are 8 marks.

3. 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit are 8 units.

4. 3 pins and 2 pins and 3 pins are 8 pins.

5. 2 apples and 6 apples are 8 apples.

6. 3 men and 5 men are 8 men.

7. 4 boys and 4 boys are 8 boys.

8. 5 miles and 3 miles are 8 miles.

9. 6 feet and 2 feet are 8 feet.

10. 7 units and 1 unit are 8 units.

Inf. Then *any* thing and *seven* more things of the same kind; or *two* and *six* more; or *three* and *five* more; or *four* and *four* more; or *five* and *three* more; or *six* and *two* more; or *seven* and *one* more, make *eight* things of the same kind.

QUES. **1.** 2 fingers and 6 fingers are how many fingers?

2. 4 pins and 4 pins are how many?

3. 1 apple and 7 apples are how many?

4. 3 caps and 4 caps are how many?

5. 7 feet and 1 foot are how many?

6. 5 rods and 3 rods are how many?

7. Charles had 6 nuts and his mother gave him 2 more; how many had he then?

8. Make 4 marks on your slate, then make 4 more; how many marks will then be on it?

9. 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 are how many?

10. 3 and 1 are how many? 3 and 4? 3 and 2? 3 and 5? 3 and 3? 7 and 1?

11. 4 and 1 are how many? 4 and 3? 4 and 2? 4 and 4? 5 and 1? 5 and 3?

12. 6 and 1 are how many? 5 and 2? 6 and 2? 2 and 4 and 2? 3 and 3 and 1?

EXERCISES FOR THE SLATE.

One.	Two.	Three.	Four.	Five.	Six.	Seven.	Eight.
1.	2.	3.	4.	5.	6.	7.	8.

3 pins			4 marks			3 tops	
2 pins			2 marks			1 top	
3 pins			2 marks			4 tops	
pins			marks			tops	

add 2	3	7	2	4	3
and 6	4	1	4	4	3

SUBTRACTION.   Sect. VI

Stat. 1 from 8 leaves 7 ; read, *one* from *eight* leaves *seven.*

Ex. **1.** Take 1 finger from 8 fingers, and 7 fingers are left.

2. Make 8 marks on your slate, then rub out 1, and 7 will remain.

3. 2 fingers from 8 fingers leaves 6 fingers.

4. From 8 pins take 3 pins, and 5 pins are left.

5. 4 apples from 8 apples leaves 4 apples.

6. Take 5 books from 8 books, and 3 books remain.

7. 6 men from 8 men leaves 2 men.

8. From 8 balls take 7 balls, and 1 ball remains.

Inf. From any *eight* things of a kind, take *one* thing, and *seven* remain ; take *two*, and *six* remain ; take *three*, and *five* remain ; take *four*, and *four* remain ; take *five*, and *three* remain ; take *six*, and *two* remain ; take *seven*, and *one* remains ; take *eight*, and *nothing* is left.

Ques. 1. Take 1 mark from 8 marks, how many are left ?

2. 2 fingers from 8 fingers leaves how many ?

3. 3 dogs from 8 dogs leaves how many?

4. 4 miles from 8 miles leaves how many?

5. 5 inches from 8 inches leaves how many?

6. 6 rods from 8 rods leaves how many?

7. 7 yards from 8 yards leaves how many?

8. 8 men from 8 men leaves what?

9. A man had 8 cows, but sold 3 of them; how many had he left?

10. 1 from 8 leaves how many? 3 from 8? 2 from 8? 4 from 8? 7 from 8?

11. 6 from 8 leaves how many? 8 from 8? 5 from 8? 2 and 2 from 8? 3 and 3 from 8?

12. 1 from 7 leaves how many? 5 from 7? 2 from 7? 4 from 7? 0 from 7? 3 from 7?

13. 1 from 6 leaves how many? 4 from 6? 2 from 6? 5 from 6? 3 from 6? 6 from 6?

14. 3 from 5 leaves how many? 2 from 4? 4 from 5? 3 from 4? 2 from 5? 5 from 5?

EXERCISES FOR THE SLATE.

from 8	from 7	from 8	from 8
take 3	take 4	take 5	take 2

8	8	8	8	6	7
4	1	6	7	4	5

3

ADDITION. Sect. VII.

Stat. 8 and 1 are 9; read, *eight* **and** *one* are *nine*.

Ex. **1.** 1 mark and 8 marks are 9 marks.

2. 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit and 1 unit are 9 units.

3. 2 apples and 7 apples are 9 apples.

4. 3 men and 6 men are 9 men.

5. 4 boys and 5 boys are 9 boys.

6. 5 inches and 4 inches are 9 inches.

7. 6 seats and 3 seats are 9 seats.

8. 7 boats and 2 boats are 9 boats.

9. 8 units and 1 unit are 9 units.

Inf. Then *any* thing and *eight* more things of the same kind; or *two* and *seven* more; or *three* and *six* more; or *four* and *five* more; or *five* and *four* more; or *six* and *three* more; or *seven* and *two* more; or *eight* and *one* more, make *nine* things of the same kind.

Ques. 1. 3 apples and 6 apples are how many apples?

2. 1 pin and 8 pins are how many?

3. 4 marks and 5 marks are how many?

4. 2 boys and 7 boys are how many boys?

5. 5 tops and 4 tops are how many?

6. How many men are 7 men and 2 men?

7. 6 hats and 3 hats are how many ?

8. 8 caps and 1 cap are how many ?

9. There are 5 desks in one row, and 4 desks in another row ; how many desks in both rows ?

10. Anna gave me 3 apples, George gave me 4, and Charles gave me 2 ; how many apples did they all give me ?

11. 1 and 8 are how many ? 3 and 5 ? 2 and 7 ? 4 and 3 ? 4 and 5 ?

12. 1 and 7 are how many ? 6 and 3 ? 4 and 4 ? 3 and 3 ? 5 and 4 ? 4 and 2 ?

13. 3 and 3 and 3 are how many ? 2 and 4 and 1 ? 3 and 4 and 2 ?

14. 2 and 2 and 2 and 3 are how many ? 2 and 3 and 1 and 2 ? 4 and 1 and 4 ?

EXERCISES FOR THE SLATE.

One.	Two.	Three.	Four.	Five.	Six.	Seven.	Eight.	Nine.
1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*

4 seats	*2 fingers*	*3 desks*
2 seats	*4 fingers*	*3 desks*
3 seats	*2 fingers*	*3 desks*
——	——	——
seats	*fingers*	*desks*

add *4*	*3*	*3*	*4*	*7*	*5*
and *5*	*4*	*6*	*4*	*2*	*3*

SUBTRACTION Sect. VII.

STAT. 1 from 9 leaves 8; read, *one* from *nine* leaves *eight*.

Ex. **1.** Make 9 marks on your slate; then rub out one of them, and 8 will be left.

2. Take 2 books from 9 books, and 7 books remain.

3. 3 pins from 9 pins leaves 6 pins.

4. 4 men from 9 men leaves 5 men.

5. Take 5 balls from 9 balls, and 4 balls are left.

6. 6 hats from 9 hats leaves 3 hats.

7. From 9 horses take 7 horses, and 2 horses will be left.

8. 8 tops from 9 tops leaves 1 top.

Inf. From any *nine* things of a kind, take *one* thing, and *eight* of a kind are left; take *two*, and *seven* are left; take *three*, and *six* are left; take *four*, and *five* are left; take *five*, and *four* are left; take *six*, and *three* are left; take *seven*, and *two* are left; take *eight*, and *one* is left; or take *nine*, and *nothing* is left.

QUES. **1.** Take 1 mark from 9 marks, how many marks will be left?

2. 2 boats from 9 boats leaves how many?

3. 3 miles from 9 miles leaves how many?

4. 4 feet from 9 feet leaves how many?

5. Take 5 boys from 9 boys, how many remain?

6. 6 chairs from 9 chairs leaves how many?

7. 7 rods from 9 rods leaves how many?

8. From 9 yards take 8 yards, and how many yards will be left?

9. 9 units from 9 units leaves how many?

10. Anna made 9 marks on her slate, but Charles rubbed out 3 of them; how many marks were left?

11. George had 9 story-books, but gave away 5 of them; how many had he left?

12. 6 from 9 leaves how many? 4 from 9? 2 from 9? 5 from 9? 7 from 9?

13. 1 from 9 leaves how many? 3 from 9? 8 from 9? 4 from 7? 3 from 6?

14. 5 and how many more will make 9? 3 and how many will make 8? 3 and how many are 9?

<center>EXERCISES FOR THE SLATE.</center>

from 9	from 9	from 9	from 9
take 3	take 5	take 7	take 9

9	9	9	9	9	8
1	4	6	2	8	4

3*

ADDITION. Sect. VIII.

STAT.   9 and 1 are 10; read, *nine* and *one* are *ten*.

Ex. **1.** 1 mark and 9 marks are 10 marks.

2. 1 unit and 9 units are *one* ten.

3. 2 ships and 8 ships are 10 ships.

4. 3 books and 7 books are 10 books.

5. 4 tops and 6 tops are 10 tops.

6. 5 boys and 5 boys are 10 boys.

7. 6 men and 4 men are 10 men.

8. 7 pens and 3 pens are 10 pens.

9. 8 desks and 2 desks are 10 desks.

10. 9 caps and 1 cap are 10 caps.

Inf.   Then *any* thing and *nine* more things of the same kind; or *two* and *eight* more; or *three* and *seven* more; or *four* and *six* more; or *five* and *five* more; or *six* and *four* more; or *seven* and *three* more; or *eight* and *two* more; or *nine* and *one* more, make *ten* things of the same kind.

Ques. **1.** 5 apples and 5 apples are what?

2. 3 books and 7 books are how many?

3. 1 man and 9 men are how many?

4. 6 seats and 4 seats are how many?

5. How many houses are 7 houses and 3 houses?

6. 2 marks and 8 marks are how many?

7. 9 toys and 1 toy are how many?

8. 4 pins and 6 pins are how many?

9. 8 hats and 2 hats are how many?

10. Make 3 marks on your slate, then 4 marks, then 3 more; how many marks will there be?

11. James has 4 tops, George 3, and Charles 3; how many tops have they all?

12. 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 and 1 are how many?

13. 2 and 2 and 2 and 2 are how many?

14. 3 and 3 and 3 are how many? 4 and 4? 5 and 5? 7 and 3?

15. 5 and 4 are how many? 8 and 2? 4 and 3 and 2? 4 and 6? 4 and 4 and 2?

EXERCISES FOR THE SLATE.

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

4 lines	*3 hooks*	*2 lines*
3 lines	*3 hooks*	*5 lines*
3 lines	*3 hooks*	*3 lines*
lines	*hooks*	*lines*

5	*6*	*8*	*4*	*3*	*4*
5	*3*	*2*	*4*	*7*	*6*

SUBTRACTION. Sect. VIII.

Stat. 1 from 10 leaves 9; read, *one* from *ten* leaves *nine.*

Ex. **1.** Make 10 marks on your slate, then rub out 1 of them, and 9 marks will be left.

2. Take 2 apples from 10 apples, and 8 apples remain.

3. 3 pins from 10 pins leaves 7 pins.

4. 4 desks from 10 desks leaves 6 desks.

5. 5 tops from 10 tops leaves 5 tops.

6. Take 6 horses from 10 horses, and 4 horses will be left.

7. 7 boys from 10 boys leaves 3 boys.

8. 8 men from 10 men leaves 2 men.

9. 9 tops from 10 tops leaves 1 top.

Inf. From any *ten* things of a kind, take *one* thing, and *nine* of a kind remain; take *two*, and *eight* remain; take *three*, and *seven* remain; take *four*, and *six* remain; take *five*, and *five* remain; take *six*, and *four* remain; take *seven*, and *three* remain; take *eight*, and *two* remain; take *nine*, and *one* remains; take *ten*, and *nothing* is left.

Ques. **1.** From 10 marks take 1 mark; how many marks will be left?

2. 2 pins from 10 pins leaves how many?

3. 3 apples from 10 apples leaves what?

4. 4 acres from 10 acres leaves how many?

5. 5 rods from 10 rods leaves how many?

6. Take 6 hoops from 10 hoops, how many hoops remain?

7. 7 feet from 10 feet leaves how many?

8. 8 boys from 10 boys leaves how many?

9. 9 books from 10 books leaves what?

10. 10 units from 10 units leaves what?

11. One 10 from one 10 leaves how many?

12. Make 10 marks on your slate, and then rub out 5 of them; how many marks will be left?

13. William bought 10 pencils, but lost 4 of them; how many had he left?

14. 1 from 10 leaves how many? 3 from 10? 5 from 10? 9 from 10? 7 from 10?

15. 2 from 10 leaves how many? 4 from 10? 6 from 10? 8 from 10? 10 from 10?

from 10	from 10	from 10	from 10
take 5	take 7	take 3	take 9

from 10	10	10	10	10	10
take 2	4	10	6	8	1

ADDITION. Sect. IX.

STAT.   1 and 10 are 11 ; to be read, *one and ten* are *eleven.*

> 2 and 10 are 12.   *Twelve.*
> 3 and 10 are 13.   *Thirteen.*
> 4 and 10 are 14.   *Fourteen.*
> 5 and 10 are 15.   *Fifteen.*

Ex. **1.** 1 unit and 10 units are 11 units.

2. 10 boys and 1 boy are 11 boys.

3. 2 men and 10 men are 12 men.

4. 10 caps and 2 caps are 12 caps.

5. 3 horses and 10 horses are 13 horses.

6. 10 seats and 3 seats are 13 seats.

7. 4 marks and 10 marks are 14 marks.

8. 10 pins and 4 pins are 14 pins.

9. 5 tops and 10 tops are 15 tops.

10. 10 hats and 5 hats are 15 hats.

Inf.   Then *ten* things and *one* more of the same kind, are *eleven* things of a kind ; or *ten* and *two* more are *twelve ;* or *ten* and *three* more are *thirteen ;* or *ten* and *four* more are *fourteen ;* or *ten* and *five* more are *fifteen.*

QUES. **1.** 10 caps and 1 cap are how many ?

2. 2 men and 10 men are how many ?

3. 10 pins and 3 pins are how many ?

4. How many houses are 4 houses and 10 houses ?

5. 5 hats and 10 hats are how many?

6. Charles had 10 apples, and his mother gave him 4 more; how many apples did he then have?

7. 2 cows are in one pasture, and 10 in another; how many in both?

8. 10 and 1 are how many? 10 and 2? 10 and 3? 10 and 4? 10 and 5?

9. 1 and 10 are how many? 3 and 10? 5 and 10? 2 and 10? 4 and 10?

10. 5 and 5 and 5 are how many? 9 and 1? 9 and 2? 9 and 3? 9 and 4?

11. 6 and 5 are how many? 6 and 6? 6 and 7? 6 and 8? 6 and 9?

EXERCISES FOR THE SLATE.

Eleven.	Twelve.	Thirteen.	Fourteen.	Fifteen.
11.	*12.*	*13.*	*14.*	*15.*

5 men		5 tops		4 fingers
4 men		5 tops		4 fingers
2 men		5 tops		4 fingers
men		tops		fingers

add 8		6		10		7		12		2
and 5		9		5		7		3		11

SUBTRACTION. Sect. IX.

STAT. 1 from 11 leaves 10 ; to be read,
one from *eleven* leaves *ten.*

2 from 12 leaves 10.
3 from 13 leaves 10.
4 from 14 leaves 10.
5 from 15 leaves 10.

Ex. **1.** Make 11 marks on your slate, then
rub out 1, and 10 marks will be left.

2. From 12 pins take 2 pins, and 10 pins
remain.

3. 3 hats from 13 hats leaves 10 hats.

4. Take 4 tops from 14 tops, and 10 tops
remain.

5. From 15 desks take 5 desks, and 10
desks remain.

Inf. From any *eleven* things of a kind,
take *one ;* or from *twelve*, take *two ;* or from
thirteen, take *three ;* or from *fourteen*, take
four ; or from *fifteen*, take *five*, and *ten* things
of a kind will be left.

QUES. **1.** Take 1 pin from 11 pins, how
many pins will be left ?

2. 10 pins from 11 pins leaves how many ?

3. 2 desks from 12 desks leaves how many ?

4. 10 seats from 12 seats leaves how many ?

5. 3 apples from 13 apples leaves what ?

6. 10 horses from 13 horses leaves what?

7. Take 4 trees from 14 trees; how many trees will be left?

8. 10 houses from 13 houses leaves what?

9. From 15 oranges take 5 oranges; how many will be left?

10. 10 books from 15 books leaves what?

11. 14 trees were standing in a row, but 4 have been cut down; how many trees are standing now?

12. 1 from 11 leaves how many? 2 from 11? 3 from 11? 4 from 11? 5 from 11?

13. 2 from 12 leaves how many? 3 from 12? 4 from 12? 5 from 12? 6 from 12?

14. 3 from 13 leaves how many? 4 from 13? 5 from 13? 6 from 13? 7 from 13?

15. 4 from 14 leaves how many? 5 from 14? 6 from 14? 7 from 14? 8 from 14?

16. 5 from 15 leaves how many? 6 from 15? 7 from 15? 8 from 15? 9 from 15?

from 15	from 14	from 13	from 15
take 5	take 7	take 8	take 3

from 15	12	11	15	15	14
take 8	6	5	10	13	12

4

ADDITION. Sect. X.

STAT.   6 and 10 are 16 ; to be read, *six* and *ten* are *sixteen*.

7 and 10 are 17.   *Seventeen.*
8 and 10 are 18.   *Eighteen.*
9 and 10 are 19.   *Nineteen.*
10 and 10 are 20.   *Twenty.*

Ex. 1. 6 units and 10 units are 16 units.
2. 10 dogs and 6 dogs are 16 dogs.
3. 7 cats and 10 cats are 17 cats.
4. 10 marks and 7 marks are 17 marks.
5. 8 horses and 10 horses are 18 horses.
6. 10 pins and 8 pins are 18 pins.
7. 9 chairs and 10 chairs are 19 chairs.
8. 10 books and 9 books are 19 books.
9. 10 trees and 10 trees are 20 trees.

Inf.   Then *ten* things and *six* more of the same kind, are *sixteen* things of a kind; or *ten* and *seven* more are *seventeen;* or *ten* and *eight* more are *eighteen;* or *ten* and *nine* more are *nineteen;* or *ten* and *ten* more are *twenty.*

Ques. 1. How many stars are 10 stars and 6 stars ?
2. 7 pins and 10 pins are how many ?
3. 10 desks and 8 desks are how many ?
4. How many houses are 9 houses and 10 houses ?

5. 10 cups and 10 cups are how many?

6. Charles made 7 marks on his slate, and George made 10 marks on his; how many marks did both make?

7. There are 10 trees in one row, and 10 in another row; how many trees in both rows?

8. 10 marks and 7 marks make how many?

9. 10 and 6 are how many? 10 and 7? 10 and 8? 10 and 9? 10 and 10?

10. 6 and 10 are how many? 8 and 10? 7 and 10? 5 and 10? 9 and 10?

11. 10 and how many more will make 18? 10 and how many will make 20?

12. 5 and 5 and 5 and 5 are how many? 6 and 4 and 8? 7 and 9 and 3?

13. 9 and 7 are how many? 9 and 8? 9 and 9? 9 and 6? 9 and 5?

14. 10 and 1 are how many? 10 and 2? 10 and 3? 10 and 4? 10 and 5?

15. 11 and 1 are how many? 12 and 1? 13 and 1? 14 and 1? 15 and 1?

16. 16 and 1 are how many? 17 and 1? 18 and 1? 19 and 1? 9 and 4?

17. 2 and 2 are how many? 3 and 3? 4 and 4? 5 and 5? 6 and 6?

18. 7 and 7 are how many? 8 and 8? 6 and 6 and 6? 7 and 7 and 6?

EXERCISES FOR THE SLATE.

Sixteen.	Seventeen.	Eighteen.	Nineteen.	Twenty.
16.	*17.*	*18.*	*19.*	*20.*

6 tops	*7* houses	*6* trees
6 tops	*5* houses	*2* trees
8 tops	*7* houses	*6* trees
tops	houses	trees

add *10*	*6*	*15*	*7*	*6,*	*16*
and *10*	*6*	*5*	*12*	*11*	*4*

SUBTRACTION. Sect. X.

STAT. 6 from 16 leaves 10; to be read,
six from *sixteen* leaves *ten.*

7 from 17 leaves 10.

8 from 18 leaves 10.

9 from 19 leaves 10.

10 from 20 leaves 10.

Ex. 1. Make 16 marks on your slate, then
rub out 6, and 10 marks will be left.

2. From 17 pencils take 7 pencils, and 10 pencils remain.

3. 8 tops from 18 tops leaves 10 tops.

4. 9 pins from 19 pins leaves 10 pins.

5. From 20 slates take 10 slates, and 10 slates will be left.

Inf. From any *sixteen* things of a kind, take *six ;* or from *seventeen,* take *seven ;* or from *eighteen,* take *eight ;* or from *nineteen,* take *nine ;* or from *twenty,* take *ten,* and *ten* things of a kind will be left.

QUES. **1.** Take 6 lamps from 16 lamps, how many lamps will be left ?

2. 10 tops from 16 tops leaves how many ?

3. 8 men from 17 men leaves how many ?

4. 10 pins from 17 pins leaves how many ?

5. From 18 houses take 8 houses, how many will be left ?

6. 10 dogs from 18 dogs leaves how many ?

7. 9 boys from 19 boys leaves how many ?

8. 10 books and how many more books make 19 books ?

9. 10 trees from 20 trees leaves how many ?

10. There were 19 sheep in a pasture, but 3 of them were driven away ; how many sheep are left in the pasture ?

11. 2 from 16 leaves how many ? 2 from 17 ? 2 from 18 ? 2 from 19 ? 2 from 20 ?

4 *

12. 3 from 16 leaves how many? 3 from 17? 3 from 18? 3 from 19? 3 from 20?

13. 4 from 16 leaves how many? 4 from 17? 4 from 18? 4 from 19? 4 from 20?

14. 5 from 16 leaves how many? 5 from 17? 5 from 18? 5 from 19? 5 from 20?

15. 6 from 16 leaves how many? 6 from 17? 6 from 18? 6 from 19? 6 from 20?

16. 7 from 16 leaves how many? 7 from 17? 7 from 18? 7 from 19? 7 from 20?

17. 8 from 16 leaves how many? 8 from 17? 8 from 18? 8 from 19? 8 from 20?

18. 9 from 16 leaves how many? 9 from 17? 9 from 18? 9 from 19? 9 from 20?

19. 10 from 16 leaves how many? 10 from 17? 10 from 18? 10 from 19? 10 from 20?

EXERCISES FOR THE SLATE.

from 20	from 20	from 20	from 20
take 10	take 7	take 6	take 9

from 20	20	18	16	17	14
take 8	5	6	8	10	7

from 20	20	20	20	16	18
take 18	15	17	14	13	16

ADDITION. SECT. XL.

STAT. 20 and 1 are 21; to be read, *twenty* and *one* are *twenty-one*.

20 and 2 are 22.   *Twenty-two.*
20 and 3 are 23.   *Twenty-three.*
20 and 4 are 24.   *Twenty-four.*
20 and 5 are 25.   *Twenty-five.*

Ex. **1.** 20 men and 1 man are 21 men.

2. 20 trees and 2 trees are 22 trees.

3. 20 horses and 3 horses are 23 horses.

4. 20 cows and 4 cows are 24 cows.

5. 20 rails and 5 rails are 25 rails.

Inf. Then *twenty* things and *one* more of the same kind, are *twenty-one* things of a kind; *twenty* and *two* more, are *twenty-two ; twenty* and *three* more, are *twenty-three ; twenty* and *four* more, are *twenty-four ; twenty* and *five* more, are *twenty-five.*

QUES. **1.** How many houses are 20 houses and 1 house ?

2. 1 pin and 20 pins are how many ?

3. 20 sheep and 2 sheep are how many ?

4. 2 dogs and 20 dogs are how many ?

5. 20 trees and 3 trees are how many ?

6. How many apples are 3 apples and 20 apples ?

7. 20 carts and 4 carts are how many?

8. 4 nuts and 20 nuts are how many?

9. 20 books and 5 books are how many?

10. 5 boys and 20 boys are how many?

11. John had 20 cents, and his sister gave him 3; how many cents did he then have?

12. Charles has 20 nuts; how many more must I give him, that he may have 25 nuts?

13. 20 and how many more will make 24?

14. 20 and how many more will make 22?

15. 1 and 20 are how many? 2 and 20? 3 and 20? 4 and 20? 5 and 20?

16. 5 and 5 and 5 and 5 and 5 are how many? 10 and 5 and 10?

17. 15 and 5 are how many? 15 and 6? 15 and 7? 15 and 8? 15 and 9? 15 and 10?

18. 16 and 5 are how many? 16 and 6? 16 and 7? 16 and 8? 16 and 9?

19. 17 and 5 are how many? 17 and 6? 17 and 7? 17 and 8? 18 and 5?

20. 18 and 6 are how many? 18 and 7? 18 and 5? 19 and 6? 14 and 10?

21. 13 and 10 are how many? 13 and 12? 12 and 10? 12 and 11? 12 and 12?

22. 10 and 10 are how many? 9 and 9? 11 and 11? 8 and 8? 7 and 7?

23. 6 and 6 are how many? 6 and 9? 6 and 19? 6 and 7? 6 and 17?

24. 6 and 6 and 6 and 6 are how many?

EXERCISES FOR THE SLATE.

Twenty-one.	Twenty-two.	Twenty-three.	Twenty-four.	Twenty-five.
21.	*22.*	*23.*	*24.*	*25.*
add 5	8	9	7	10
and 10	8	7	7	4
and 10	8	9	7	11
12	16	11	8	13	11
12	7	14	16	12	11
10	10	16	17	5	6
10	15	9	6	18	19

SUBTRACTION. Sect. XI.

STAT.   1 from 21 leaves 20 ; to be read,
one from *twenty-one* leaves *twenty.*

2 from 22 leaves 20.

3 from 23 leaves 20.

4 from 24 leaves 20.

5 from 25 leaves 20.

Ex. **1.** From 21 horses take 1 horse, and 20 horses are left.

2. 2 pins from 22 pins leaves 20 pins.

3. 3 hats from 23 hats leaves 20 hats.

4. From 24 pencils take 4 pencils, and 20 pencils remain.

5. 5 trees from 25 trees leaves 20 trees.

Inf. From any *twenty-one* things of a kind, take *one;* or from *twenty-two*, take *two;* or from *twenty-three*, take *three;* or from *twenty-four*, take *four;* or from *twenty-five*, take *five*, and *twenty* things of a kind will be left.

Ques. **1.** From 21 ploughs take 1 plough, and how many will be left?

2. 20 carts from 21 carts leaves how many?

3. 2 hats from 22 hats leaves how many?

4. 20 men from 22 men leaves how many?

5. From 23 oxen take 3 oxen; how many oxen will be left?

6. 20 feet from 23 feet leaves how many?

7. 4 pins from 24 pins leaves how many?

8. 20 caps from 24 caps leaves how many?

9. 5 hens from 25 hens leaves how many?

10. 20 tops from 25 tops leaves how many?

11. Charles had 25 apples and gave away all but 4; how many did he give away?

12. Anna had 24 books and gave away 20 of them; how many books has she left?

13. 1 from 21 leaves how many? 2 from 22? 3 from 23? 4 from 24? 5 from 25?

14. 1 from 22 leaves how many? 1 from 23? 1 from 24? 1 from 25? 2 from 23?

15. 2 from 24 leaves how many? 2 from 25? 3 from 24? 3 from 25? 4 from 25?

16. 24 from 25 leaves how many? 23 from 25? 22 from 25? 21 from 25?

17. 10 from 20 leaves how many? 11 from 22? 12 from 24? 15 from 25?

18. 11 from 25 leaves how many? 12 from 25? 13 from 25? 14 from 25?

EXERCISES FOR THE SLATE.

from 25	25	25	25	25	25
take 24	22	20	15	23	19

from 25	25	25	25	25	25
take 21	25	17	10	18	16

from 24	24	24	24	24	23
take 19	20	15	8	22	4

from 23	22	21	23	22	21
take 14	13	12	19	8	7

ADDITION. Sect. XII.

STAT. 20 and 6 are 26; to be read, *twenty* and *six* are *twenty-six*.

    20 and 7 are 27. *Twenty-seven.*
    20 and 8 are 28. *Twenty-eight.*
    20 and 9 are 29. *Twenty-nine.*
    20 and 10 are 30. *Thirty.*

Ex. **1.** 20 names and 6 names are 26 names.
2. 20 hills and 7 hills are 27 hills.
3. 20 posts and 8 posts are 28 posts.
4. 20 pins and 9 pins are 29 pins.
5. 20 days and 10 days are 30 days.

Inf. Then *twenty* things and *six* more of the same kind, are *twenty-six* things of a kind; *twenty* and *seven* more, are *twenty-seven;* *twenty* and *eight* more, are *twenty-eight;* *twenty* and *nine* more, are *twenty-nine; twenty* and *ten* more, are *thirty.*

QUES. **1.** How many rivers are 20 rivers and 6 rivers?
2. 6 nuts and 20 nuts are how many?
3. 20 men and 7 men are how many?
4. 7 pins and 20 pins are how many?
5. How many houses are 20 houses and 8 houses?

6. 8 caps and 20 caps are how many?

7. 20 hats and 9 hats are how many?

8. How many cherries are 9 cherries and 20 cherries?

9. 20 books and 10 books are how many?

10. 10 feet and 20 feet are how many?

11. Anna has 20 apples; if I give her 8 more, how many will she have?

12. 20 men and 10 more men will make how many men?

13. 20 and 6 are how many? 20 and 7? 20 and 8? 20 and 9? 20 and 10?

14. 1 and 25 are how many? 1 and 26? 1 and 27? 1 and 28? 1 and 29?

15. 6 and 20 are how many? 6 and 21? 6 and 22? 6 and 23? 6 and 24?

16. 7 and 20 are how many? 8 and 20? 9 and 20? 10 and 20? 10 and 10 and 10?

17. 25 and 1 are how many? 25 and 2? 25 and 3? 25 and 4? 25 and 5?

18. 15 and 5 and 5 and 5 are how many? 15 and 10 and 5? 15 and 15?

19. 19 and 6 are how many? 19 and 7? 19 and 8? 19 and 9? 19 and 10?

20. 18 and 5 are how many? 18 and 6? 18 and 7? 18 and 8? 18 and 9?

21. 18 and 10 are how many? 18 and 11? 18 and 12? 19 and 11? 19 and 4?

5

22. 17 and 3 are how many? 17 and 4?
17 and 5? 17 and 6? 17 and 7?

23. 17 and 8 are how many? 17 and 9?
17 and 10? 17 and 11? 17 and 12?

EXERCISES FOR THE SLATE.

Twenty-six.	Twenty-seven.	Twenty-eight.	Twenty-nine.	Thirty.
26.	*27.*	*28.*	*29.*	*30.*

	add	10	9	14	12	10
	and	10	9	4	9	3
	and	10	9	12	8	17

15	16	18	17	14	13
15	13	12	10	16	13

14	19	18	8	25	23
14	9	11	18	5	6

26	22	3	21	24	10
3	8	27	7	6	20

SUBTRACTION. Sect. XII.

STAT.   6 from 26 leaves 20 ; to be read,
six from *twenty-six* leaves *twenty*.

> 7 from 27 leaves 20.
>
> 8 from 28 leaves 20.
>
> 9 from 29 leaves 20.
>
> 10 from 30 leaves 20.

Ex. **1.** From 26 melons take 6 melons, and
20 melons will be left.

2. 7 pins from 27 pins leaves 20 pins.

3. 8 tops from 28 tops leaves 20 tops.

4. 9 trees from 29 trees leaves 20 trees.

5. 10 feet from 30 feet leaves 20 feet.

Inf.   From any *twenty-six* things of a kind,
take *six ;* or from *twenty-seven*, take *seven ;* or
from *twenty-eight*, take *eight ;* or from *twenty-
nine*, take *nine ;* or from *thirty*, take *ten,* and
twenty things of a kind will be left.

QUES. **1.** From 26 miles take 6 miles, and
how many miles will be left ?

2. 20 hats from 26 hats leaves how many ?

3. 7 men from 27 men leaves how many ?

4. 20 pins from 27 pins leaves how many ?

5. 8 feet from 28 feet leaves how many ?

6. From 28 horses take 20 horses, and how
many horses will be left ?

7. 9 trees from 29 trees leaves how many ?

8. 20 books from 29 books leaves how many ?

9. 30 apples less 10 apples are how many apples ?

10. James rode 20 miles before dinner; how many miles did he ride after dinner, to travel 27 miles in one day ?

11. Anna has 9 pencils; how many more must I give her, that she may have 30 pencils ?

12. 23 men and how many more men are 27 men ?

13. 20 and how many make 30 ?

14. 10 and how many make 30 ?

15. 30 less 10 are how many ?

16. 30 less 20 are how many ?

17. 15 and how many make 30 ?

18. 10 and how many make 26 ?

19. 25 are how many less than 30 ?

20. 5 from 30 leaves how many ?

21. 6 from 26 leaves how many ? 7 from 27 ? 8 from 28 ? 9 from 29 ? 10 from 30 ?

22. 1 from 26 leaves how many ? 1 from 27 ? 1 from 28 ? 1 from 29 ? 1 from 30 ?

23. 30 less 1 are how many ? 30 less 2 ? 30 less 3 ? 30 less 4 ? 30 less 5 ?

24. 30 less 6 are how many ? 30 less 7 ? 30 less 8 ? 30 less 9 ? 30 less 10 ?

25. 5 from 10 leaves how many ? 5 from 15 ? 5 from 20 ? 5 from 25 ? 5 from 30 ?

26. 30 less 5 are how many ? 30 less 10 ? 30 less 15 ? 30 less 20 ? 30 less 25 ?

27. 30 less 29 are how many ? 30 less 28 ? 30 less 27 ? 30 less 26 ? 30 less 25 ?

28. 30 less 24 are how many ? 30 less 23 ? 30 less 22 ? 30 less 21 ? 30 less 20 ?

EXERCISES FOR THE SLATE.

from	3 tens	30 units	3 tens	30
take	1 ten	10 units	2 tens	20

from	30	30	30	30	30	30
take	9	19	29	8	18	28

from	30	30	30	30	30	30
take	7	17	27	6	16	26

from	25	25	25	25	25	25
take	6	16	9	19	7	17

from	29	29	28	27	26	30
take	27	23	24	20	22	30

5*

MULTIPLICATION. SECT. I.

STATEMENT.

Once 1 is 1.	7 times 1 are 7.
2 times 1 are 2.	8 times 1 are 8.
3 times 1 are 3.	9 times 1 are 9.
4 times 1 are 4.	10 times 1 are 10.
5 times 1 are 5.	11 times 1 are 11.
6 times 1 are 6.	12 times 1 are 12.

Ex. 1. 1 thumb and 1 thumb, or 2 times 1 thumb, are 2 thumbs.

2. 1 pin and 1 pin and 1 pin, or 3 times 1 pin, are 3 pins.

3. 4 times 1 book are 4 books.

4. 5 times 1 horse are 5 five horses.

5. 6 times 1 hat are 6 hats.

6. 7 times 1 desk are 7 desks.

7. 8 times 1 tree are 8 trees.

8. 9 times 1 post are 9 posts.

9. 10 times 1 cent are 10 cents.

10. 11 times 1 cap are 11 caps.

11. 12 times 1 top are 12 tops.

Inf. Then any *one* thing and *another* thing of the same kind, or *two* times *one* thing, are *two* things of a kind; *three* times *one* thing are *three* things, &c.

QUES. 1. 1 hand and 1 hand are how many times 1 hand ? How many hands ?

2. Then 2 times 1 hand are how many?

3. 1 pin and 1 pin and 1 pin are how many times 1 pin? How many pins?

4. Then 3 times 1 pin are how many pins?

5. 4 times 1 top are how many tops?

6. 5 times 1 cat are how many cats?

7. 6 times 1 book are how many books?

8. 7 times 1 desk are how many desks?

9. 8 times 1 cent are how many cents?

10. 9 times 1 dollar are how many dollars?

11. 10 times 1 horse are how many horses?

12. 11 times 1 leaf are how many leaves?

13. 12 times 1 unit are how many units?

14. If 1 apple costs 1 cent, how many times 1 cent must you give for 7 apples? How many cents?

15. Twice 1 are how many? 3 times 1? 4 times 1? 5 times 1? 6 times 1? 7 times 1? 8 times 1? 9 times 1? 10 times 1?, 11 times 1? 12 times 1?

EXERCISES FOR THE SLATE.

multiply	1	1	1	1	1
by	2	3	4	5	6

multiply	1	1	1	1	1	1
by	7	8	9	10	11	12

DIVISION. Sect. I.

STATEMENT.

1 in 1 *once.*	1 in 7 *seven* times.
1 in 2 *twice.*	1 in 8 *eight* times.
1 in 3 *three* times.	1 in 9 *nine* times.
1 in 4 *four* times.	1 in 10 *ten* times.
1 in 5 *five* times.	1 in 11 *eleven* times.
1 in 6 *six* times.	1 in 12 *twelve* times.

Ex. **1.** In 2 thumbs there are twice 1 thumb; *because* 1 *thumb and* 1 *thumb are* 2 *thumbs.*

2. In 3 apples there are 3 times 1 apple; *because* 1 *apple and* 1 *apple and* 1 *apple are* 3 *apples.*

3. In 4 fingers there are 4 times 1 finger; *because* 1 *finger and* 1 *finger and* 1 *finger and* 1 *finger are* 4 *fingers.*

4. In 5 books there are 5 times 1 book; *because* 5 *times* 1 *book are* 5 *books.*

5. In 6 pins there are 6 times 1 pin; *because* 6 *times* 1 *pin are* 6 *pins.*

6. In 7 tops there are 7 times 1 top; *because* 7 *times* 1 *top are* 7 *tops.*

7. In 8 fingers there are 8 times 1 finger; *because* 8 *times* 1 *finger are* 8 *fingers.*

8. In 9 cents there are 9 times 1 cent; *because* 9 *times* 1 *cent are* 9 *cents.*

9. In 10 dollars there are 10 times 1 dollar; *because* 10 *times* 1 *dollar are* 10 *dollars.*

10. In 11 feet there are 11 times 1 foot; *because* 11 *times* 1 *foot are* 11 *feet.*

11. In 12 miles there are 12 times 1 mile; *because* 12 *times* 1 *mile are* 12 *miles.*

Inf. Then in any *two* things of a kind, there are *twice one* of those things; in *three* things, there are *three* times *one* thing; in *four* things, there are *four* times *one* thing, &c.

Ques. **1.** In 2 hands how many times 1 hand? Why?

    2. In 3 books how many times 1 book?

    3. In 4 pins how many times 1 pin?

    4. In 5 cents how many times 1 cent?

    5. In 6 dimes how many times 1 dime?

    6. In 7 dollars how many times 1 dollar?

    7. In 8 inches how many times 1 inch?

    8. In 9 feet how many times 1 foot?

    9. In 10 yards how many times 1 yard?

    10. In 11 rods how many times 1 rod?

    11. In 12 miles how many times 1 mile?

    12. If 1 apple costs 1 cent, how many times 1 apple can you buy for 9 cents? How many apples?

    13. How many times 1 in 2? 1 in 3? 1 in 4? 1 in 5? 1 in 6? 1 in 7? 1 in 8? 1 in 9? 1 in 10? 1 in 11? 1 in 12?

EXERCISES FOR THE SLATE.

$1) \underline{2}$ | $1) \underline{3}$ | $1) \underline{4}$ | $1) \underline{5}$ | $1) \underline{6}$ | $1) \underline{7}$

$1) \underline{8}$ | $1) \underline{9}$ | $1) \underline{10}$ | $1) \underline{11}$ | $1) \underline{12}$

MULTIPLICATION. Sect. II.

STATEMENT.

Once 2 is 2.	7 times 2 are 14.
2 times 2 are 4.	8 times 2 are 16.
3 times 2 are 6.	9 times 2 are 18.
4 times 2 are 8.	10 times 2 are 20.
5 times 2 are 10.	11 times 2 are 22.
6 times 2 are 12.	12 times 2 are 24.

Ex. **1.** 2 hands and 2 hands, or twice 2 hands, are 4 hands.

2. 2 books and 2 books and 2 books, or 3 times 2 books, are 6 books.

3. 2 tops and 2 tops and 2 tops and 2 tops, or 4 times 2 tops, are 8 tops.

4. 2 pins and 2 pins and 2 pins and 2 pins and 2 pins, or five times 2 pins, are 10 pins.

5. 6 times 2 hats are 12 hats.

6. 7 times 2 feet are 14 feet.

7. 8 times 2 rods are 16 rods.

8. 9 times 2 men are 18 men.

9. 10 times 2 miles are 20 miles.

10. 11 times 2 cents are 22 cents.

11. 12 times 2 dollars are 24 dollars.

Inf. Then any *two* things of a kind, and *two* more of the same kind, or *twice two* things, are *four* things of a kind; *three* times *two* things are *six* things, &c.

Ques. 1. 2 thumbs and 2 thumbs are how many times 2 thumbs? How many thumbs?

2. Then 2 times 2 thumbs are how many thumbs?

3. 2 pins and 2 pins and 2 pins are how many times 2 pins? How many pins?

4. Then 3 times 2 pins are how many pins?

5. 2 fingers and 2 fingers and 2 fingers and 2 fingers are how many times 2 fingers? How many fingers?

6. Then 4 times 2 fingers are how many?

7. 2 tops and 2 tops and 2 tops and 2 tops and 2 tops are how many times 2 tops? How many tops?

8. Then 5 times 2 tops are how many tops?

9. 6 times 2 cents are how many cents?

10. 7 times 2 dollars are how many dollars?

11. 8 times 2 peaches are how many peaches?

12. 9 times 2 chairs are how many chairs?

13. 10 times 2 desks are how many desks?

14. 11 times 2 men are how many men?

15. 12 times 2 trees are what?

16. If you pay 2 cents for 1 peach, how many times 2 cents must you pay for 8 peaches? How many cents?

17. 2 horses make a span. How many times 2 horses are there in 4 span? How many horses?

18. 2 oxen make 1 yoke; how many times 2 oxen in 10 yoke? How many oxen?

19. If 1 lemon costs 2 cents, how many times 2 cents must be paid for 12 lemons? How many cents?

20. How many are 2 times 2? 3 times 2? 4 times 2? 5 times 2? 6 times 2? 7 times 2? 8 times 2? 9 times 2? 10 times 2? 11 times 2? 12 times 2?

EXERCISES FOR THE SLATE.

mult.	2	2	2	2	2	2
by	1	2	3	4	5	6

mult.	2	2	2	2	2	2
by	7	8	9	10	11	12

DIVISION. Sect. II.

STATEMENT.

2 in 2 *once*.	2 in 14 *seven* times.
2 in 4 *twice*.	2 in 16 *eight* times.
2 in 6 *three* times.	2 in 18 *nine* times.
2 in 8 *four* times.	2 in 20 *ten* times.
2 in 10 *five* times.	2 in 22 *eleven* times.
2 in 12 *six* times.	2 in 24 *twelve* times.

Ex. 1. In 4 fingers there are 2 times 2 fingers; *because 2 fingers and 2 fingers are 4 fingers.*

2. In 6 books there are 3 times 2 books; *because 2 books and 2 books and 2 books are 6 books.*

3. In 8 fingers there are 4 times 2 fingers; *because 2 fingers and 2 fingers and 2 fingers and 2 fingers are 8 fingers.*

4. In 10 pins there are 5 times 2 pins; *because 2 pins and 2 pins and 2 pins and 2 pins and 2 pins are 10 pins.*

6. In 12 trees there are 6 times 2 trees; *because 6 times 2 trees are 12 trees.*

7. In 14 feet there are 7 times 2 feet; *because 7 times 2 feet are 14 feet.*

8. In 16 miles there are 8 times 2 miles; *because 8 times 2 miles are 16 miles.*

6

9. In 18 apples there are 9 times 2 apples ; *because* 9 *times* 2 *apples are* 18 *apples.*

10. In 20 men there are 10 times 2 men ; *because* 10 *times* 2 *men are* 20 *men.*

11. In 22 inches there are 11 times 2 inches ; *because* 11 *times* 2 *inches are* 22 *inches.*

12. In 24 hours there are 12 times 2 hours ; *because* 12 *times* 2 *hours are* 24 *hours.*

Inf. Then in any *four* things of a kind, there are *twice two* things of a kind ; in *six* things, there are *three* times *two* things ; in *eight* things, *four* times *two* things, &c.

QUES. **1.** In 2 hands how many times 2 hands ?

2. In 4 fingers how many times 2 fingers ?

3. How many times 2 apples are there in 6 apples ?

4. How many times 2 fingers in 8 fingers ?

5. How many times 2 men in 10 men ?

6. How many times 2 cents in 12 cents ?

7. How many times 2 dollars in 14 dollars ?

8. How many times 2 miles in 16 miles ?

9. In 18 days how many times 2 days ?

10. In 20 trees how many times 2 trees ?

11. In 22 rods how many times 2 rods ?

12. In 24 hours how many times 2 hours ?

13. If it takes 2 oxen to make 1 yoke, how many yoke of cattle would 18 oxen make ?

14. Since 2 horses make a span, how many span would 22 horses make?

15. 2 pints make 1 quart. How many times 2 pints in 16 pints? How many quarts?

16. When 1 lemon costs 2 cents, how many lemons can you buy for 14 cents?

17. How many times 2 in 4? Why? *Because 2 and 2, or 2 times 2, are 4.*

18. How many times 2 in 6? 2 in 8? 2 in 10? 2 in 12? 2 in 14? 2 in 16? 2 in 18? 2 in 20? 2 in 22? 2 in 24?

EXERCISES FOR THE SLATE.

2) 2 | 2) 4 | 2) 6 | 2) 8 | 2) 10

2) 12 | 2) 14 | 2) 16 | 2) 18 | 2) 20

ADDITION.   Sect. XIII.

STAT.   30 and 1 are 31; to be read, *thirty* and *one* are *thirty-one.*

30 and 2 are 32.   *Thirty-two.*

30 and 3 are 33.   *Thirty-three.*

30 and   4 are 34.   *Thirty-four.*
30 and   5 are 35.   *Thirty-five.*
30 and   6 are 36.   *Thirty-six.*
30 and   7 are 37.   *Thirty-seven.*
30 and   8 are 38.   *Thirty-eight.*
30 and   9 are 39.   *Thirty-nine.*
30 and 10 are 40.   *Forty.*

QUES. 1. 30 and 1 are how many? 31 and
1? 32 and 1? 33 and 1? 34 and 1?

2. 35 and 1 are how many? 36 and 1? 37
and 1? 38 and 1? 39 and 1?

3. How many are 30 and 1? 30 and 3?
30 and 5? 30 and 7? 30 and 9?

4. How many are 30 and 2? 30 and 4?
30 and 6? 30 and 8? 30 and 10?

5. How many *tens* are 1 ten and 1 ten?
How many *units*? Then 10 and 10 are how
many?

6. How many *tens* are 2 tens and 1 ten?
How many *units*? Then 20 and 10 are how
many?

7. How many *tens* are 2 tens and 2 tens?
How many *units*? Then 20 and 20 are how
many?

8. 10 and 10 and 10 are how many? 10
and 10 and 10 and 10?

9. 10 and 5 are how many? 15 and 5?
25 and 5? 35 and 5?

EXERCISES FOR THE SLATE.

Thirty-one.	Thirty-two.	Thirty-three.	Thirty-four.	Thirty-five.	Thirty-six.	Thirty-seven.	Thirty-eight.	Thirty-nine.	Forty.

31 . 32 . 33 . 34 . 35 . 36 . 37 . 38 . 39 . 40

add *1 ten*	10 *units*	2 *tens*	20
and *1 ten*	10 *units*	1 *ten*	10
and *1 ten*	10 *units*	1 *ten*	10

add 13	11	15	12	13
and 13	11	10	12	16
and 13	11	15	12	10

| add 2 *tens* | 20 *units* | 2 *tens* | 20 |
| and 1 *ten* | 10 *units* | 2 *tens* | 20 |

| add 15 | 16 | 19 | 18 | 30 |
| and 19 | 17 | 19 | 18 | 10 |

| add 16 | 26 | 16 | 16 | 17 |
| and 8 | 8 | 18 | 16 | 17 |

6*

SUBTRACTION.   Sect. XIII.

STAT.   1 from 40 leaves 39 ; to be read, *one* from *forty* leaves *thirty-nine*.   •

    2 from 40 leaves 38.   *Thirty-eight.*
    3 from 40 leaves 37.   *Thirty-seven.*
    4 from 40 leaves 36.   *Thirty-six.*
    5 from 40 leaves 35.   *Thirty-five.*
    6 from 40 leaves 34.   *Thirty-four.*
    7 from 40 leaves 33.   *Thirty-three.*
    8 from 40 leaves 32.   *Thirty-two.*
    9 from 40 leaves 31.   *Thirty-one.*
   10 from 40 leaves 30.   *Thirty.*

QUES. 1. 1 from 31 leaves how many? 2 from 32? 3 from 33? 4 from 34? 5 from 35?

2. 6 from 36 leaves how many? 7 from 37? 8 from 38? 9 from 39? 10 from 40?

3. 40 less 1 are how many? 40 less 2? 40 less 3? 40 less 4? 40 less 5?

4. 40 less 6 are how many? 40 less 7? 40 less 8? 40 less 9? 40 less 10?

5. 39 less 1 are how many? 38 less 1? 37 less 1? 36 less 1? 35 less 1?

6. 34 less 1 are how many? 33 less 1? 32 less 1? 31 less 1?

7. 40 less 39 are how many? 40 less 38? 40 less 37? 40 less 36? 40 less 35?

8. 40 less 34 are how many? 40 less 33? 40 less 32? 40 less 31? 40 less 30?

.9. 1 ten from 4 tens leaves how many *tens?* How many *units?* Then 40 less 10 are how many?

10. 2 tens from 4 tens leaves how many *tens?* How many *units?* Then 40 less 20 are how many?

ιτι   **EXERCISES FOR THE SLATE.**

| from | *4 tens* | *40 units* | *4 tens* | *40* |
| take | *1 ten* | *10 units* | *2 tens* | *20* |

| from | *4 tens* | *40 units* | *3 tens* | *30* |
| take | *3 tens* | *30 units* | *2 tens* | *20* |

| from | *40* | *40* | *40* | *40* | *40* |
| take | *25* | *35* | *39* | *29* | *19* |

| from | *40* | *40* | *30* | *35* | *34* |
| take | *9* | *17* | *16* | *26* | *18* |

| from | *40* | *40* | *40* | *40* | *40* |
| take | *8* | *18* | *28* | *38* | *23* |

| from | *35* | *35* | *38* | *37* | *33* |
| take | *20* | *15* | *19* | *18* | *24* |

MULTIPLICATION. Sect. III.

Statement.

Once 3 is 3.	7 times 3 are **21.**
2 times 3 are 6.	8 times 3 are **24.**
3 times 3 are 9.	9 times 3 are **27.**
4 times 3 are 12.	10 times 3 are **30.**
5 times 3 are 15.	11 times 3 are **33.**
6 times 3 are 18.	12 times 3 are **36.**

Ex. **1.** 3 books and 3 books, or twice 3 books, are 6 books.

2. 3 marks and 3 marks and 3 marks, or 3 times 3 marks, are 9 marks.

3. 3 units and 3 units and 3 units and 3 units, or 4 times 3 units, are 12 units.

4. 3 pins and 3 pins and 3 pins and 3 pins and 3 pins, or 5 times 3 pins, are 15 pins.

5. 6 times 3 feet are 18 feet.

6. 7 times 3 rods are 21 rods.

7. 8 times 3 miles are 24 miles.

8. 9 times 3 days are 27 days.

9. 10 times 3 men are 30 men.

10. 11 times 3 yards are 33 yards.

11. 12 times 3 trees are 36 trees.

Inf. Then any *three* things of a kind, and *three* more of the same kind, or *twice three* things, are *six* things of a kind ; *three* times *three* things are *nine* things, &c.

QUES. **1.** 3 units and **3** units are how many times 3 units? How many units?

2. Then **2** times 3 units are how many?

3. 3 units and 3 units and 3 units are how many times 3 units? How many units?

4. Then 3 times 3 units are how many?

5. 3 cents and 3 cents and **3** cents and 3 cents are how many times 3 cents? How many cents?

6. Then **4** times 3 cents are how many cents?

7. 3 pins and 3 pins and 3 pins and 3 pins and 3 pins are how many times 3 pins? How many pins?

8. Then **5** times 3 pins are how many pins?

9. 6 times 3 cents are what?

10. 7 times 3 men are how many men?

11. 8 times 3 apples are how many apples?

12. 9 times 3 chairs are how many chairs?

13. 10 times 3 desks are how many desks?

14. 11 times 3 boys are how many boys?

15. 12 times 3 dollars are how many dollars?

16. If you pay 3 cents for 1 orange, how many times 3 cents must you pay for 9 oranges? How many cents?

17. If a barrel of apples costs 3 dollars, how many times 3 dollars would 12 barrels cost? How many dollars?

18. 3 and 3 and 3 and 3 and 3 and 3 and 3 are how many times 3 ? How many ?

19. Then 7 times 3 are how many ?

20. Twice 3 are how many ? once 3 ? 3 times 3 ? 4 times 3 ? 5 times 3 ? 6 times 3 ? 7 times 3 ? 8 times 3 ? 9 times 3 ? 10 times 3 ? 11 times 3 ? 12 times 3 ?

EXERCISES FOR THE SLATE.

mult. 3	3	3	3	3	3
by 2	1	3	4	5	6

mult. 3	3	3	3	3	3
by 7	8	9	10	11	12

DIVISION. SECT. III.

STATEMENT.

3 in 3 *once.*	3 in 21 *seven* times.
3 in 6 *twice.*	3 in 24 *eight* times.
3 in 9 *three* times.	3 in 27 *nine* times.
3 in 12 *four* times.	3 in 30 *ten* times.
3 in 15 *five* times.	3 in 33 *eleven* times.
3 in 18 *six* times.	3 in 36 *twelve* times

Ex. **1.** In 6 fingers there are twice 3 fingers ; *because* 3 *fingers and* 3 *fingers are* 6 *fingers.*

2. In 9 books there are 3 times 3 books ; *because* 3 *books and* 3 *books and* 3 *books are* 9 *books.*

3. In 12 apples there are 4 times 3 apples ; *because* 3 *apples and* 3 *apples and* 3 *apples and* 3 *apples are* 12 *apples.*

4. In 15 pins there are 5 times 3 pins; *because* 3 *pins and* 3 *pins and* 3 *pins and* 3 *pins and* 3 *pins are* 15 *pins.*

5. In 18 trees there are 6 times 3 trees · *because* 6 *times* 3 *trees are* 18 *trees.*

6. In 21 feet there are 7 times 3 feet; *because* 7 *times* 3 *feet are* 21 *feet.*

7. In 24 yards there are 8 times 3 yards ; *because* 8 *times* 3 *yards are* 24 *yards.*

8. In 27 days there are 9 times 3 days ; *because* 9 *times* 3 *days are* 27 *days.*

9. In 30 hours there are 10 times 3 hours ; *because* 10 *times* 3 *hours are* 30 *hours.*

10. In 33 miles there are 11 times 3 miles ; *because* 11 *times* 3 *miles are* 33 *miles.*

11. In 36 men there are 12 times 3 men ; *because* 12 *times* 3 *men are* 36 *men.*

Inf. Then in any *six* things of a kind, there are *twice three* things of a kind ; in *nine* things there are *three* times *three* things; in *twelve* things, *four* times *three* things, &c.

QUES. 1. In 3 books how many times 3 books?

2. In 6 fingers how many times 3 fingers?

3. In 9 apples how many times 3 apples?

4. How many times 3 inches in 12 inches?

5. How many times 3 feet in 15 feet?

6. How many times 3 yards in 18 yards?

7. How many times 3 rods in 21 rods?

8. In 24 miles how many times 3 miles?

9. In 27 minutes how many times 3 minutes?

10. In 30 hours how many times 3 hours?

11. In 33 days how many times 3 days?

12. In 36 cents how many times 3 cents?

13. If you pay 3 cents for a lemon, how many lemons can you buy with 24 cents?

14. If 1 yard of cloth costs 3 dollars, how many yards could you buy with 33 dollars?

15. How many times 3 in 9? Why? *Because 3 and 3 and 3, or 3 times 3, are 9.*

16. How many times 3 in 6? 3 in 9? 3 in 12? 3 in 15? 3 in 18? 3 in 21? 3 in 24? 3 in 27? 3 in 30? 3 in 33? 3 in 36?

EXERCISES FOR THE SLATE.

$3) 3$ | $3) 6$ | $3) 9$ | $3) 12$ | $3) 15$

$3) 18$ | $3) 21$ | $3) 24$ | $3) 27$ | $3) 30$

ADDITION. Sect. XIV.

STAT.   40 and 1 are 41 ; to be read, *forty* and *one* are *forty-one.*

40 and 2 are 42.   *Forty-two.*
40 and 3 are 43.   *Forty-three.*
40 and 4 are 44.   *Forty-four.*
40 and 5 are 45.   *Forty-five.*
40 and 6 are 46.   *Forty-six.*
40 and 7 are 47.   *Forty-seven.*
40 and 8 are 48.   *Forty-eight.*
40 and 9 are 49.   *Forty-nine.*
40 and 10 are 50.   *Fifty.*

QUES. 1. How many are 40 and 1 ? 41 and 1? 42 and 1? 43 and 1? 44 and 1? 45 and 1? 46 and 1? 47 and 1? 48 and 1? 49 and 1?

2. How many are 40 and 2? 40 and 3? 40 and 5? 40 and 7? 40 and 9?

3. How many *tens* are 3 tens and 1 ten ? How many *units?*   Then 30 and 10 are how many ?

4. How many *tens* are 3 tens and 2 tens ? How many *units?*   Then 30 and 20 are how many ?

5. How many *tens* are 4 tens and 1 ten ? How many *units?*   Then 40 and 10 are how many ?

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6. 10 and 10 are how many? 10 and 20? 20 and 20? 20 and 20 and 10?

7. 10 and 5 are how many? 15 and 5? 20 and 5? 25 and 5?

8. 35 and 5 are how many? 40 and 5? 45 and 5? 25 and 25?

9. 15 and 10 are how many? 25 and 10? 35 and 10? 15 and 15?

EXERCISES FOR THE SLATE.

Forty-one.	Forty-two.	Forty-three.	Forty-four.	Forty-five.
41.	*42.*	*43.*	*44.*	*45.*
Forty-six.	Forty-seven.	Forty-eight.	Forty-nine.	Fifty.
46.	*47.*	*48.*	*49.*	*50.*

add *2 tens*	*20 units*	*1 ten*		*10*
and *2 tens*	*20 units*	*3 tens*		*30*
and *1 ten*	*10 units*	*1 ten*		*10*

add *25*	*20*	*35*	*25*	*20*
and *25*	*15*	*15*	*15*	*30*

add *19*	*29*	*29*	*19*	*28*
and *9*	*9*	*19*	*19*	*17*

add *37*	*27*	*26*	*36*	*24*
and *8*	*17*	*18*	*9*	*24*

SUBTRACTION. Sect. XIV.

STAT. 1 from 50 leaves 49 ; to be read, *one* from *fifty* leaves *forty-nine.*

2 from 50 leaves 48. *Forty-eight.*
3 from 50 leaves 47. *Forty-seven.*
4 from 50 leaves 46. *Forty-six.*
5 from 50 leaves 45. *Forty-five.*
6 from 50 leaves 44. *Forty-four.*
7 from 50 leaves 43. *Forty-three.*
8 from 50 leaves 42. *Forty-two.*
9 from 50 leaves 41. *Forty-one.*
10 from 50 leaves 40. *Forty.*

QUES. **1.** 1 from 41 leaves how many ? 2 from 42 ? 3 from 43 ? 4 from 44 ? 5 from 45? 6 from 46 ? 7 from 47 ? 8 from 48? 9 from 49 ? 10 from 50 ?

2. 50 less 1 are how many ? 50 less 2 ? 50 less 3 ? 50 less 4 ? 50 less 5 ? 50 less 6 ? 50 less 7 ? 50 less 8 ? 50 less 9 ? 50 less 10 ?

3. 1 ten from 5 tens leaves how many *tens ?* How many *units ?* Then 50 less 10 are how many ?

4. 1 ten from 4 tens leaves how many *tens ?* How many *units ?* Then 40 less 10 are how many ?

5. 1 ten from 3 tens leaves how many

tens?　How many *units?*　Then 30 less **10** are how many?

6. 2 tens from 5 tens leaves how many *tens?*　How many *units?*　Then 50 less 20 are how many?

7. 50 less 30 are how many?　50 less 40?　40 less 20?　40 less 30?

8. 25 from 50 leaves how many?　35 from 50?　45 from 50?　15 from 50?

9. 41 from 50 leaves how many?　42 from 50?　43 from 50?　44 from 50?　45 from 50?

10. 46 from 50 leaves how many?　47 from 50?　48 from 50?　49 from 50?

EXERCISES FOR THE SLATE.

from 5 tens	50 units	5 tens	50 units
take 1 ten	10 units	2 tens	20 units

from 5 tens	50 units	5 tens	50 units
take 3 tens	30 units	4 tens	40 units

from 50	50	50	50	45
take 15	25	35	45	25

from 49	48	46	45	44
take 37	19	27	36	5

MULTIPLICATION. Sect. IV.

STATEMENT.

Once 4 is 4.	7 times 4 are 28.
2 times 4 are 8.	8 times 4 are 32.
3 times 4 are 12.	9 times 4 are 36.
4 times 4 are 16.	10 times 4 are 40.
5 times 4 are 20.	11 times 4 are 44.
6 times 4 are 24.	12 times 4 are 48.

Ex. **1.** 4 fingers and 4 fingers, or twice 4 fingers, are 8 fingers.

2. 4 books and 4 books and 4 books, or 3 times 4 books, are 12 books.

3. 4 feet and 4 feet and 4 feet and 4 feet, or 4 times 4 feet, are 16 feet.

4. 4 pins and 4 pins and 4 pins and 4 pins and 4 pins, or 5 times 4 pins, are 20 pins.

5. 6 times 4 marks are 24 marks.

6. 7 times 4 figures are 28 figures.

7. 8 times 4 pails are 32 pails.

8. 9 times 4 horses are 36 horses.

9. 10 times 4 trees are 40 trees.

10. 11 times 4 acres are 44 acres.

11. 12 times 4 birds are 48 birds.

Inf. Then any *four* things of a kind, and four more of the same kind, or *twice four*

7 *

things, are *eight* things of a kind ; *three* times *four* things are *twelve* things, &c.

QUES. 1. 4 units and 4 units are how many times 4 units ?   How many units ?

2. Then twice 4 units are how many ?

3. 4 cents and 4 cents and 4 cents are how many times 4 cents ?   How many cents ?

4. Then 3 times 4 cents are how many cents ?

5. 4 men and 4 men and 4 men and 4 men are how many times 4 men ?   How many men ?

6. Then 4 times 4 men are how many men ?

7. 4 pins and 4 pins and 4 pins and 4 pins and 4 pins are how many times 4 pins ?   How many pins ?

8. Then 5 times 4 pins are how many pins ?

9. 6 times 4 cents are what ?

10. 7 times 4 pears are how many pears ?

11. 8 times 4 pins are how many ?

12. 9 times 4 carts are how many carts ?

13. 10 times 4 boys are how many ?

14. 11 times 4 sheep are how many sheep ?

15. 12 times 4 bricks are how many bricks ?

16. There are 4 gills in 1 pint.   How many times 4 gills are there in 9 pints ?   How many gills ?

17. There are 4 quarts in 1 gallon. How many times 4 quarts are there in 12 gallons? How many quarts?

18. Twice 4 are how many? Once 4? 3 times 4? 4 times 4? 5 times 4? 6 times 4? 7 times 4? 8 times 4? 9 times 4? 10 times 4? 11 times 4? 12 times 4?

EXERCISES FOR THE SLATE.

| mult. | 4 | 4 | 4 | 4 | 4 | 4 |
| by | 2 | 1 | 3 | 4 | 5 | 6 |

| mult. | 4 | 4 | 4 | 4 | 4 | 4 |
| by | 7 | 8 | 9 | 10 | 11 | 12 |

DIVISION. SECT. IV.

STATEMENT.

4 in 4 *once.*	4 in 28 *seven* times.
4 in 8 *twice.*	4 in 32 *eight* times.
4 in 12 *three* times.	4 in 36 *nine* times.
4 in 16 *four* times.	4 in 40 *ten* times.
4 in 20 *five* times.	4 in 44 *eleven* times.
4 in 24 *six* times.	4 in 48 *twelve* times.

Ex. **1.** In 8 fingers there are twice 4 fingers ; *because 4 fingers and 4 fingers are 8 fingers.*

2. In 12 feet there are 3 times 4 feet; *because 4 feet and 4 feet and 4 feet are 12 feet.*

3. In 16 men there are 4 times 4 men ; *because 4 men and 4 men and 4 men and 4 men are 16 men.*

4. In 20 pins there are 5 times 4 pins ; *because 4 pins and 4 pins and 4 pins and 4 pins and 4 pins are 20 pins.*

5. In 24 trees there are 6 times 4 trees ; *because 6 times 4 trees are 24 trees.*

6. In 28 books there are 7 times 4 books; *because 7 times 4 books are 28 books.*

7. In 32 days there are 8 times 4 days; *because 8 times 4 days are 32 days.*

8. In 36 hours there are 9 times 4 hours; *because 9 times 4 hours are 36 hours.*

9. In 40 years there are 10 times 4 years; *because 10 times 4 years are 40 years.*

10. In 44 miles there are 11 times 4 miles; *because 11 times 4 miles are 44 miles.*

11. In 48 men there are 12 times 4 men ; *because 12 times 4 men are 48 men.*

Inf. Then in any *eight* things of a kind, there are *twice four* things of a kind ; in *twelve* things there are *three* times *four* things ;

in *sixteen* things there are *four* times *four* things, &c.

Ques. 1. In 4 fingers how many times 4 fingers?

2. In 8 fingers how many times 4 fingers?

3. In 12 apples how many times 4 apples?

4. In 16 dollars how many times 4 dollars?

5. How many times 4 cents in 20 cents?

6. How many times 4 trees in 24 trees?

7. How many times 4 cents in 28 cents?

8. How many times 4 dollars in 32 dollars?

9. In 36 gallons how many times 4 gallons?

10. In 40 quarts how many times 4 quarts?

11. In 44 gills how many times 4 gills?

12. In 48 cents how many times 4 cents?

13. How many times 4 gills in 24 gills? Since 4 gills make a pint, how many pints in 24 gills?

14. How many times 4 quarts in 36 quarts? Since 4 quarts make a gallon, how many gallons are there in 36 quarts?

15. If you pay 4 cents for an orange, how many oranges can you buy with 40 cents?

16. How many times 4 in 12? Why? *Because 4 and 4 and 4, or 3 times 4, are 12.*

17. How many times 4 in 8? 4 in 4? 4 in 12? 4 in 16? 4 in 20? 4 in 24? 4 in 28? 4 in 32? 4 in 36? 4 in 40? 4 in 44? 4 in 48?

EXERCISES FOR THE SLATE.

4) 8 | 4) 12 | 4) 16 | 4) 20 | 4) 24

4) 28 | 4) 32 | 4) 36 | 4) 48

ADDITION.　Sect. XV.

STAT.　50 and 1 are 51; to be read, *fifty* and *one* are *fifty-one*.

50 and　2 are 52.　*Fifty-two.*
50 and　3 are 53.　*Fifty-three.*
50 and　4 are 54.　*Fifty-four.*
50 and　5 are 55.　*Fifty-five.*
50 and　6 are 56.　*Fifty-six.*
50 and　7 are 57.　*Fifty-seven.*
50 and　8 are 58.　*Fifty-eight.*
50 and　9 are 59.　*Fifty-nine.*
50 and 10 are 60.　*Sixty.*

QUES. 1.　How many are 50 and 1? 51
and 1? 52 and 1? 53 and 1? 54 and 1? 55
and 1? 56 and 1? 57 and 1? 58 and 1? 59
and 1?

2. How many are 50 and 1? 50 and 3?
50 and 5? 50 and 7? 50 and 9? 50 and 2?
50 and 4? 50 and 6? 50 and 8? 50 and 10?

3. How many *tens* are 2 tens and 1 ten?
How many *units?* Then 20 and 10 are how
many?

4. How many *tens* are 2 tens and 2 tens?
How many *units?* Then 20 and 20 are how
many?

5. How many *tens* are 2 tens and 2 tens
and 1 ten? How many *units?* Then 20 and
20 and 10 are how many?

6. How many *tens* are 2 tens and 2 tens
and 2 tens? How many *units?* Then 20
and 20 and 20 are how many?

7. 3 tens and 2 tens are how many *tens?*
How many *units?* Then 30 and 20 are how
many?

8. 3 tens and 3 tens are how many *tens?*
How many *units?* Then 30 and 30 are how
many?

9. 20 and 10 are how many? 20 and 20?
20 and 30? 20 and 40?

10. 30 and 10 are how many? 40 and 10?
50 and 10? 20 and 30 and 10?

11. 20 and 5 are how many? 25 and 5?
30 and 5? 35 and 5?

12. 45 and 5 are how many? 50 and 5?
55 and 5? 25 and 25 and 5?

EXERCISES FOR THE SLATE.

Fifty-one.	Fifty-two.	Fifty-three.	Fifty-four.	Fifty-five.
51.	52.	53.	54.	55.

Fifty-six.	Fifty-seven.	Fifty-eight.	Fifty-nine.	Sixty.
56.	57.	58.	59.	60.

add 2 tens	20 units	19	18
and 2 tens	20 units	19	18
and 2 tens	20 units	19	18

add 3 tens	30 units	4 tens	40
and 3 tens	30 units	2 tens	20

add 39	39	29	49	28
and 9	19	29	9	28

add 33	27	42	26	33
and 19	27	9	26	27

add 17	21	25	17	20
and 17	19	15	19	12
and 17	16	15	18	28

SUBTRACTION. Sect. XV.

STAT.　1 from 60 leaves 59 ; to be read, *one* from *sixty* leaves *fifty-nine.*

2 from 60 leaves 58.　*Fifty-eight.*

3 from 60 leaves 57.　*Fifty-seven.*

4 from 60 leaves 56.　*Fifty-six.*

5 from 60 leaves 55.　*Fifty-five.*

6 from 60 leaves 54.　*Fifty-four.*

7 from 60 leaves 53.　*Fifty-three.*

8 from 60 leaves 52.　*Fifty-two.*

9 from 60 leaves 51.　*Fifty-one.*

10 from 60 leaves 50.　*Fifty.*

QUES. **1.** 1 from 51 leaves how many? 2 from 52? 3 from 53? 4 from 54? 5 from 55? 6 from 56? 7 from 57? 8 from 58? 9 from 59? 10 from 60?

2. 60 less 1 are how many? 60 less 2? 60 less 3? 60 less 4? 60 less 5? 60 less 6? 60 less 7? 60 less 8? 60 less 9? 60 less 10?

3. 59 less 1 are how many? 58 less 1? 57 less 1? 56 less 1? 55 less 1? 54 less 1? 53 less 1? 52 less 1? 51 less 1?

4. 1 ten from 6 tens leaves how many *tens?* How many *units?* Then 60 less 10 are how many?

5. 2 tens from 6 tens leaves how many *tens?* How many *units?* Then 60 less 20 are how many?

8

6. 3 tens from 6 tens leaves how many *tens?* How many *units?* Then 60 less 30 are how many?

7. 60 less 40 are how many? 60 less 50? 50 less 40? 50 less 30? 60 less 30?

8. 60 less 51 are how many? 60 less 52? 60 less 53? 60 less 54? 60 less 55? 60 less 56? 60 less 57? 60 less 58? 60 less 59?

EXERCISES FOR THE SLATE.

from 6 tens	60 units	6 tens	60
take 1 ten	10 units	2 tens	20

from 6 tens	60 units	6 tens	60
take 3 tens	30 units	4 tens	40

from 60	60	60	60	60
take 9	19	29	39	49

from 53	54	55	56	58
take 44	35	26	17	9

from 60	60	60	60	60
take 5	15	25	35	45

MULTIPLICATION. Sect. V

STATEMENT.

Once 5 is 5.	7 times 5 are 35.
2 times 5 are 10.	8 times 5 are 40.
3 times 5 are 15.	9 times 5 are 45.
4 times 5 are 20.	10 times 5 are 50.
5 times 5 are 25.	11 times 5 are 55.
6 times 5 are 30.	12 times 5 are 60.

Ex. **1.** 5 books and 5 books, or twice 5 books, are 10 books.

2. 5 feet and 5 feet and 5 feet, or 3 times 5 feet, are 15 feet.

3. 5 men and 5 men and 5 men and 5 men, or 4 times 5 men, are 20 men.

4. 5 pins and 5 pins and 5 pins and 5 pins and 5 pins, or 5 times 5 pins, are 25 pins.

5. 6 times 5 rods are 30 rods.

6. 7 times 5 cents are 35 cents.

7. 8 times 5 dollars are 40 dollars.

8. 9 times 5 plums are 45 plums.

9. 10 times 5 ducks are 50 ducks.

10. 11 times 5 rings are 55 rings.

11. 12 times 5 nails are 60 nails.

Inf. Then any *five* things of a kind, and *five* more of the same kind, or *twice five* things, are *ten* things of a kind; *three* times *five* things are *fifteen* things, &c.

Ques. **1.** 5 units and 5 units are how many times 5 units?   How many units?

2. Then 2 times 5 units are how many?

3. 5 men and 5 men and 5 men are how many times 5 men?   How many men?

4. Then 3 times 5 men are how many men?

5. 5 pins and 5 pins and 5 pins and 5 pins are how many times 5 pins?   How many pins?

6. Then 4 times 5 pins are how many pins?

7. 5 feet and 5 feet and 5 feet and 5 feet and 5 feet are how many times 5 feet?   How many feet?

8. Then 5 times 5 feet are how many feet?

9. 6 times 5 cents are how many cents?

10. 7 times 5 yards are how many yards?

11. 8 times 5 hens are how many hens?

12. 9 times 5 pounds are how many pounds?

13. 10 times 5 ounces are how many ounces?

14. 11 times 5 men are how many men?

15. 12 times 5 marks are how many marks?

16. If you pay 5 cents for a pencil, how many times 5 cents must you pay for 9 pencils?   How many cents?

17. When there are 5 desks in each row, how many desks are there in 7 rows?

18. Twice 5 are how many?   once 5? 3 times 5? 4 times 5? 5 times 5? 6 times 5? 7 times 5? 8 times 5? 9 times 5? 10 times 5? 11 times 5? 12 times 5?

EXERCISES FOR THE SLATE.

mult.	5	5	5	5	5	5
by	2	1	3	4	5	6

mult.	5	5	5	5	5	5
by	7	8	9	10	11	12

DIVISION. SECT. V.

STATEMENT.

5 in 5 *once.*	5 in 35 *seven* times.
5 in 10 *twice.*	5 in 40 *eight* times.
5 in 15 *three* times.	5 in 45 *nine* times.
5 in 20 *four* times.	5 in 50 *ten* times.
5 in 25 *five* times.	5 in 55 *eleven* times.
5 in 30 *six* times.	5 in 60 *twelve* times.

Ex. **1.** In 10 books there are twice 5 books;
because 5 books and 5 books are 10 *books.*

2. In 15 men there are 3 times 5 men;
because 5 men and 5 men and 5 men are 15
men.

3. In 20 pins there are 4 times 5 pins;

8 *

because 5 pins and 5 pins and 5 pins and 5 pins are 20 *pins.*

4. In 25 feet there are 5 times 5 feet ; *because 5 feet and 5 feet and 5 feet and 5 feet and 5 feet are* 25 *feet.*

5. In 30 days there are 6 times 5 days ; *because 6 times 5 days are* 30 *days.*

6. In 35 hours there are 7 times 5 hours ; *because 7 times 5 hours are* 35 *hours.*

7. In 40 rods there are 8 times 5 rods; *because 8 times 5 rods are* 40 *rods.*

8. In 45 inches there are 9 times 5 inches ; *because 9 times 5 inches are* 45 *inches.*

9. In 50 miles there are 10 times 5 miles ; *because 10 times 5 miles are* 50 *miles.*

10. In 55 pounds there are 11 times 5 pounds ; *because* 11 *times 5 pounds are* 55 *pounds.*

11. In 60 years there are 12 times 5 years ; *because* 12 *times 5 years are* 60 *years.*

Inf. Then in any *ten* things of a kind, there are *twice five* things of a kind ; in *fifteen* things, there are *three* times *five* things ; in *twenty* things, *four* times *five* things, &c.

QUES. **1.** How many times 5 books in 5 books ?

2. How many times 5 books in 10 books ?

3. How many times 5 apples in 15 apples ?

4. How many times 5 gills in 20 gills?

5. How many times 5 yards in 25 yards?

6. How many times 5 nails in 30 nails?

7. In 35 pounds how many times 5 pounds?

8. In 40 balls how many times 5 balls?

9. In 45 days how many times 5 days?

10. In 50 hours how many times 5 hours?

11. In 55 miles how many times 5 miles?

12. In 60 minutes how many times 5 minutes?

13. If a man travels 5 miles in an hour, in how many hours will he travel 55 miles.

14. If a barrel of flour costs 5 dollars, how many barrels can be bought with 40 dollars?

15. How many times 5 in 20? Why? *Because 5 and 5 and 5 and 5, or 4 times 5, are* 20.

16. How many times 5 in 5? 5 in 10? 5 in 15? 5 in 20? 5 in 25? 5 in 30? 5 in 35? 5 in 40? 5 in 45? 5 in 50? 5 in 55? 5 in 60?

EXERCISES FOR THE SLATE.

5) 5	5) 10	5) 15	5) 20
5) 25	5) 30	5) 35	5) 40
5) 45	5) 50	5) 55	5) 60

ADDITION. Sect. XVI.

STAT.   60 and 1 are 61 ; to be read,
sixty and *one* are *sixty-one.*

      60 and 2 are 62.   *Sixty-two.*
      60 and 3 are 63.   *Sixty-three.*
      60 and 4 are 64.   *Sixty-four.*
      60 and 5 are 65.   *Sixty-five.*
      60 and 6 are 66.   *Sixty-six.*
      60 and 7 are 67.   *Sixty-seven.*
      60 and 8 are 68.   *Sixty-eight.*
      60 and 9 are 69.   *Sixty-nine.*
      60 and 10 are 70.   *Seventy.*

QUES. 1. How many are 60 and 1? 61 and
1? 62 and 1? 63 and 1? 64 and 1?

2. How many are 65 and 1? 66 and 1?
67 and 1? 68 and 1? 69 and 1?

3. How many are 60 and 1? 60 and 3?
60 and 5? 60 and 7? 60 and 9?

4. How many are 60 and 2? 60 and 4?
60 and 6? 60 and 8? 60 and 10?

5. How many *tens* are 5 tens and 1 ten?
How many *units?*   Then 50 and 10 are how
many?

6. 5 tens and 2 tens are how many *tens?*
How many *units?*   Then 50 and 20 are how
many?

7. 10 and 10 are how many? 20 and 10? 20 and 20? 20 and 30?

8. 30 and 10 are how many? 30 and 20? 30 and 40? 40 and 20?

9. 30 and 30 are how many? 50 and 20? 60 and 10? 20 and 20 and 20?

10. 15 and 10 are how many? 25 and 10? 35 and 10? 45 and 10?

11. 55 and 10 are how many? 65 and 10? 35 and 20? 35 and 35?

EXERCISES FOR THE SLATE.

Sixty-one.	Sixty-two.	Sixty-three.	Sixty-four.	Sixty-five.
61.	62.	63.	64.	65.

Sixty-six.	Sixty-seven.	Sixty-eight.	Sixty-nine.	Seventy.
66.	67.	68.	69.	70.

add *2 tens*	*20 units*	*21*	*22*
and *3 tens*	*30 units*	*21*	*22*
and *2 tens*	*20 units*	*21*	*22*

add *35*	*33*	*29*	*34*	*31*
and *35*	*33*	*29*	*34*	*31*

add *29*	*39*	*49*	*38*	*59*
and *19*	*19*	*19*	*17*	*9*

SUBTRACTION.　Sect. XVI.

STAT.　1 from 70 leaves 69; to be **read**, *one* from *seventy* leaves *sixty-nine*.

　　2 from 70 leaves 68.　*Sixty-eight.*
　　3 from 70 leaves 67.　*Sixty-seven.*
　　4 from 70 leaves 66.　*Sixty-six.*
　　5 from 70 leaves 65.　*Sixty-five.*
　　6 from 70 leaves 64.　*Sixty-four.*
　　7 from 70 leaves 63.　*Sixty-three.*
　　8 from 70 leaves 62.　*Sixty-two.*
　　9 from 70 leaves 61.　*Sixty-one.*
　10 from 70 leaves 60.　*Sixty.*

QUES. **1.**　1 from 61 leaves how many? 2 from 62? 3 from 63? 4 from 64? 5 from 65? 6 from 66? 7 from 67? 8 from 68? 9 from 69? 10 from 70?

2. 70 less 1 are how many? 70 less 2? 70 less 3? 70 less 4? 70 less 5? 70 less 6? 70 less 7? 70 less 8? 70 less 9? 70 less 10?

3. 69 less 1? 68 less 1? 67 less 1? 66 less 1? 65 less 1? 64 less 1? 63 less 1? 62 less 1? 61 less 1?

4. 70 less 61 are how many? 70 less 62? 70 less 63? 70 less 64? 70 less 65? 70 less 66? 70 less 67? 70 less 68? 70 less 69? 70 less 70?

5. 1 ten from 7 tens leaves how many *tens?* How many *units?* Then 70 less 10 are how many?

6. 2 tens from 7 tens leaves how many *tens?* How many *units?* Then 70 less 20 are how many?

7. 70 less 30 are how many? 70 less 40? 70 less 50? 70 less 60?

8. 5 from 70 leaves how many? 15 from 70? 25 from 70? 35 from 70? 45 from 70? 55 from 70? 65 from 70?

EXERCISES FOR THE SLATE.

from 7 tens	70 units	7 tens	70 units
take 1 ten	10 units	2 tens	20 units

from 70	70	70	70	70
take 30	40	50	60	70

from 70	70	70	70	70
take 9	19	29	39	49

from 70	70	70	70	70
take 25	35	45	55	65

ADDITION. Sect. XVII.

STAT. 70 and 1 are 71 ; to be read, *seventy* and *one* are *seventy-one*.

70 and 2 are 72.   *Seventy-two.*
70 and 3 are 73.   *Seventy-three.*
70 and 4 are 74.   *Seventy-four.*
70 and 5 are 75.   *Seventy-five.*
70 and 6 are 76.   *Seventy-six.*
70 and 7 are 77.   *Seventy-seven.*
70 and 8 are 78.   *Seventy-eight.*
70 and 9 are 79.   *Seventy-nine.*
70 and 10 are 80.   *Eighty.*

Ques. 1. How many are 70 and 1 ? 71 and 1 ? 72 and 1 ? 73 and 1? 74 and 1 ? 75 and 1 ? 76 and 1 ? 77 and 1 ? 78 and 1 ? 79 and 1 ?

2. How many are 70 and 2 ? 70 and 3 ? 70 and 4 ? 70 and 5 ? 70 and 6 ? 70 and 7 ? 70 and 8 ? 70 and 9 ? 70 and 10 ?

3. How many *tens* are 7 tens and 1 ten ? How many *units* ? Then 70 and 10 are how many ?

4. How many *tens* are 6 tens and 1 ten ? How many *units* ? Then 60 and 10 are how many ?

5. How many *tens* are 6 tens and 2 tens ?

How many *units?* Then 60 and 20 are how many?

6. 30 and 30 are how many? 30 and 40? 40 and 40? 50 and 30?

7. 25 and 10 are how many? 35 and 10? 45 and 10? 55 and 10? 65 and 10?

EXERCISES FOR THE SLATE.

Seventy-one.	Seventy-two.	Seventy-three.	Seventy-four.	Seventy-five.
71.	72.	73.	74.	75.

Seventy-six.	Seventy-seven.	Seventy-eight.	Seventy-nine.	Eighty.
76.	77.	78.	79.	80.

add 2 tens	20 units	25	25
and 3 tens	30 units	25	35
and 3 tens	30 units	25	10

add 4 tens	40	38	37	39
and 4 tens	40	38	37	39

add 39	39	39	50	45
and 9	19	29	30	25

add 48	48	48	36	44
and 8	18	28	36	27

9

SUBTRACTION. Sect. XVII.

STAT.   1 from 80 leaves 79 ; to be read, *one* from *eighty* leaves *seventy-nine.*

    2 from 80 leaves 78. *Seventy-eight.*
    3 from 80 leaves 77. *Seventy-seven.*
    4 from 80 leaves 76. *Seventy-six.*
    5 from 80 leaves 75. *Seventy-five.*
    6 from 80 leaves 74. *Seventy-four.*
    7 from 80 leaves 73. *Seventy-three.*
    8 from 80 leaves 72. *Seventy-two.*
    9 from 80 leaves 71. *Seventy-one.*
   10 from 80 leaves 70. *Seventy.*

QUES. 1.   1 from 71 leaves how many ? 2 from 72 ? 3 from 73 ? 4 from 74 ? 5 from 75 ? 6 from 76 ? 7 from 77 ? 8 from 78 ? 9 from 79 ? 10 from 80 ?

2. 80 less 1 are how many ? 80 less 2 ? 80 less 3 ? 80 less 4 ? 80 less 5 ? 80 less 6 ? 80 less 7 ? 80 less 8 ? 80 less 9 ? 80 less 10 ?

3. 79 less 1 are how many ? 78 less 1 ? 77 less 1 ? 76 less 1 ? 75 less 1 ? 74 less 1 ? 73 less 1 ? 72 less 1 ? 71 less 1 ?

4. 80 less 79 are how many ? 80 less 78 ? 80 less 77 ? 80 less 76 ? 80 less 75 ? 80 less 74 ? 80 less 73 ? 80 less 72 ? 80 less 71 ? 80 less 70 ?

5. 2 tens from 8 tens leaves how many *tens*? How many *units*? Then 80 less 20 are how many?

6. 4 tens from 8 tens leaves how many *tens*? How many *units*? Then 80 less 40 are how many?

7. 80 less 30 are how many? 80 less 50? 80 less 60? 80 less 70?

8. 5 from 80 leaves how many? 15 from 80? 25 from 80? 35 from 80? 45 from 80? 55 from 80? 65 from 80? 75 from 80?

EXERCISES FOR THE SLATE.

from 8 tens	80 units	8 tens	80
take 1 ten	10 units	2 tens	20

from 8 tens	80 units	8 tens	80
take 3 tens	30 units	4 tens	40

from 80	80	80	80	80
take 50	60	70	80	75

from 80	80	80	80	80
take 9	29	39	59	79

MULTIPLICATION. Sect. VI.

STATEMENT.

Once 6 is 6.	7 times 6 are 42.
2 times 6 are 12.	8 times 6 are 48.
3 times 6 are 18.	9 times 6 are 54.
4 times 6 are 24.	10 times 6 are 60.
5 times 6 are 30.	11 times 6 are 66.
6 times 6 are 36.	12 times 6 are 72.

Ex. **1.** 6 apples and 6 apples, or twice 6 apples, are 12 apples.

2. 6 pins and 6 pins and 6 pins, or 3 times 6 pins, are 18 pins.

3. 6 men and 6 men and 6 men and 6 men, or 4 times 6 men, are 24 men.

4. 6 feet and 6 feet and 6 feet and 6 feet and 6 feet, or 5 times 6 feet, are 30 feet.

5. 6 times 6 birds are 36 birds.

6. 7 times 6 cows are 42 cows.

7. 8 times 6 sheep are 48 sheep.

8. 9 times 6 horses are 54 horses.

9. 10 times 6 acres are 60 acres.

10. 11 times 6 rods are 66 rods.

11. 12 times 6 yards are 72 yards.

Inf. Then any *six* things of a kind and *six* more of the same kind, or *twice six* things, are *twelve* things of a kind; *three* times *six* things are *eighteen* things, &c.

Ques. 1. 6 houses and 6 houses are how many times 6 houses? How many houses?

2. Then 2 times 6 houses are how many houses?

3. 6 boys and 6 boys and 6 boys are how many times 6 boys? How many boys?

4. Then 3 times 6 boys are how many boys?

5. 6 pins and 6 pins and 6 pins and 6 pins are how many times 6 pins? How many pins?

6. Then 4 times 6 pins are how many pins?

7. 6 trees and 6 trees and 6 trees and 6 trees and 6 trees are how many times 6 trees? How many trees?

8. Then 5 times 6 trees are how many trees?

9. 6 times 6 cents are how many?

10. 7 times 6 dollars are how many dollars?

11. 8 times 6 inches are how many inches?

12. 9 times 6 feet are how many feet?

13. 10 times 6 yards are how many yards?

14. 11 times 6 rods are how many rods?

15. 12 times 6 miles are how many miles?

16. There are 6 shillings in 1 dollar. How many times 6 shillings would there be in 9 dollars? How many shillings?

17. How many times 6 shillings in 11 dollars? How many shillings?

9 *

18. How many shillings are equal to **5** dollars?

19. Once 6 are how many? Twice 6? 3 times 6? 4 times 6? 5 times 6? 6 times 6? 7 times 6? 8 times 6? 9 times 6? 10 times 6? 11 times 6? 12 times 6?

EXERCISES FOR THE SLATE.

| mult. | 6 | 6 | 6 | 6 | 6 | 6 |
| by | 2 | 3 | 4 | 1 | 5 | 6 |

| mult. | 6 | 6 | 6 | 6 | 6 | 6 |
| by | 7 | 8 | 9 | 10 | 11 | 12 |

DIVISION. SECT. VI.

STATEMENT.

6 in 6 *once*.	6 in 42 *seven* times.
6 in 12 *twice*.	6 in 48 *eight* times.
6 in 18 *three* times.	6 in 54 *nine* times.
6 in 24 *four* times.	6 in 60 *ten* times.
6 in 30 *five* times.	6 in 66 *eleven* times.
6 in 36 *six* times.	6 in 72 *twelve* times.

Ex. **1.** In 12 books there are twice 6 books ; *because* 6 *books and* 6 *books are* 12 *books.*

2. In 18 pins there are 3 times 6 pins; *because* 6 *pins and* 6 *pins and* 6 *pins are* 18 *pins.*

3. In 24 trees there are 4 times 6 trees ; *because* 6 *trees and* 6 *trees and* 6 *trees and* 6 *trees are* 24 *trees.*

4. In 30 feet there are 5 times 6 feet ; *because* 6 *feet and* 6 *feet and* 6 *feet and* 6 *feet and* 6 *feet are* 30 *feet.*

5. In 36 men there are 6 times 6 men ; *because* 6 *times* 6 *men are* 36 *men.*

6. In 42 days there are 7 times 6 days ; *because* 7 *times* 6 *days are* 42 *days.*

7. In 48 inches there are 8 times 6 inches ; *because* 8 *times* 6 *inches are* 48 *inches.*

8. In 54 acres there are 9 times 6 acres ; *because* 9 *times* 6 *acres are* 54 *acres.*

9. In 60 minutes there are 10 times 6 minutes ; *because* 10 *times* 6 *minutes are* 60 *minutes.*

10. In 66 hours there are 11 times 6 hours ; *because* 11 *times* 6 *hours are* 66 *hours.*

11. In 72 years there are 12 times 6 years ; *because* 12 *times* 6 *years are* 72 *years.*

Inf. Then in any *twelve* things of a kind, there are *twice six* things of a kind ; in *eighteen* things, there are *three* times *six* things ; in *twenty-four* things, *four* times *six* things, &c.

QUES. 1. How many times 6 books in 6 books?

2. How many times 6 books can you take from 12 books? Then how many times 6 books in 12 books?

3. How many times 6 apples can you take from 18 apples? Then how many times 6 apples in 18 apples?

4. How many times can you take 6 balls from 24 balls? Then how many times 6 balls in 24 balls?

5. In 30 men how many times 6 men?

6. In 36 days how many times 6 days?

7. In 42 hours how many times 6 hours?

8. In 48 minutes how many times 6 minutes?

9. In 54 pounds how many times 6 pounds?

10. In 60 quarts how many times 6 quarts?

11. In 66 shillings how many times 6 shillings?

12. In 72 shillings how many times 6 shillings? How many dollars, since it takes 6 shillings to make a dollar?

13. In 54 shillings how many times 6 shillings? How many dollars?

14. In 48 shillings how many times 6 shillings? How many dollars?

15. In 60 shillings how many times 6 shillings? How many dollars?

EXERCISES FOR THE SLATE.

$$6\,)\,\underline{6} \quad | \quad 6\,)\,\underline{12} \quad | \quad 6\,)\,\underline{18} \quad | \quad 6\,)\,\underline{24}$$

$$6\,)\,\underline{30} \quad | \quad 6\,)\,\underline{36} \quad | \quad 6\,)\,\underline{42} \quad | \quad 6\,)\,\underline{48}$$

$$6\,)\,\underline{54} \quad | \quad 6\,)\,\underline{60} \quad | \quad 6\,)\,\underline{66} \quad | \quad 6\,)\,\underline{72}$$

ADDITION. Sect. XVIII.

STAT. 80 and 1 are 81 ; to be read, *eighty* and *one* are *eighty-one.*

80 and 2 are 82. *Eighty-two.*
80 and 3 are 83. *Eighty-three.*
80 and 4 are 84. *Eighty-four.*
80 and 5 are 85. *Eighty-five.*
80 and 6 are 86. *Eighty-six.*
80 and 7 are 87. *Eighty-seven.*
80 and 8 are 88. *Eighty-eight.*
80 and 9 are 89. *Eighty-nine.*
80 and 10 are 90. *Ninety.*

QUES. 1. How many are 80 and 1 ? 81 and 1 ? 82 and 1 ? 83 and 1 ? 84 and 1 ? 85

and 1? 86 and 1? 87 and 1? 88 and 1?   89
and 1?

2. How many are 80 and 2? 80 and 3?
80 and 4? 80 and 5? 80 and 6? 80 and 7?
80 and 8? 80 and 9? 80 and 10?

3. 7 tens and 2 tens are how many *tens?*
How many *units?*   Then 70 and 20 are how
many?

4. 4 tens and 5 tens are how many *tens?*
How many *units?*   Then 40 and 50 are how
many?

5. 40 and 20 are how many? 40 and 30?
40 and 40? 80 and 10?

6. How many are 55 and 5? 65 and 5?
75 and 5? 85 and 5?

EXERCISES FOR THE SLATE.

Eighty-one.	Eighty-two.	Eighty-three.	Eighty-four.	Eighty-five.
81.	*82.*	*83.*	*84.*	*85.*

Eighty-six.	Eighty-seven.	Eighty-eight.	Eighty-nine.	Ninety.
86.	*87.*	*88.*	*89.*	*90.*

add *2 tens*	*20* units	*2 tens*	*20*
and *2 tens*	*20* units	*2 tens*	*20*
and *2 tens*	*20* units	*3 tens*	*30*
and *2 tens*	*20* units	*2 tens*	*20*

add *15*	*16*	*17*	*18*	*19*
and *15*	*16*	*17*	*18*	*19*
and *15*	*16*	*17*	*18*	*19*
and *15*	*16*	*17*	*18*	*19*

add *30*	*29*	*25*	*28*	*26*
and *30*	*29*	*25*	*28*	*26*
and *30*	*29*	*25*	*28*	*26*

SUBTRACTION.   Sect. XVIII.

Stat.   1 from 90 leaves 89; to be read, *one* from *ninety* leaves *eighty-nine.*

> 2 from 90 leaves 88.   *Eighty-eight.*
> 3 from 90 leaves 87.   *Eighty-seven.*
> 4 from 90 leaves 86.   *Eighty-six.*
> 5 from 90 leaves 85.   *Eighty-five.*
> 6 from 90 leaves 84.   *Eighty-four.*
> 7 from 90 leaves 83.   *Eighty-three.*
> 8 from 90 leaves 82.   *Eighty-two.*
> 9 from 90 leaves 81.   *Eighty-one*
> 10 from 90 leaves 80.   *Eighty.*

QUES. 1. 1 from 81 leaves how many?
2 from 82? 3 from 83? 4 from 84? 5 from 85?
6 from 86? 7 from 87? 8 from 88? 9 from
89? 10 from 90?

2. 90 less 1 are how many? 89 less 1?
88 less 1? 87 less 1? 86 less 1? 85 less 1?
84 less 1? 83 less 1? 82 less 1? 81 less 1?

3. 90 less 2 are how many? 90 less 3?
90 less 4? 90 less 5? 90 less 6? 90 less 7?
90 less 8? 90 less 9? 90 less 10?

4. 90 less 89 are how many? 90 less 88?
90 less 87? 90 less 86? 90 less 85? 90 less
84? 90 less 83? 90 less 82? 90 less 81? 90
less 80?

5. 89 less 88 are how many? 88 less 87?
87 less 86? 86 less 85? 85 less 84? 84 less
83? 83 less 82? 82 less 81? 81 less 80?

6. 2 tens from 9 tens leaves how many
tens? How many *units?* Then 90 less 20
are how many?

7. 3 tens from 9 tens leaves how many
tens? How many *units?* Then 90 less 30
are how many?

8. 90 less 10 are how many? 80 less 10?
70 less 10? 60 less 10?

9. 90 less 40 are how many? 90 less 50?
90 less 60? 90 less 70?

10. 5 from 90 leaves how many? 15 from
90? 25 from 90? 35 from 90? 45 from 90?

EXERCISES FOR THE SLATE.

from	9 tens	90 units	9 tens	90
take	1 ten	10 units	2 tens	20

from	9 tens	90 units	9 tens	90
take	3 tens	30 units	4 tens	40

from	90	90	90	90	90
take	50	60	70	80	90

from	90	90	90	90	90
take	35	45	55	65	75

from	90	90	90	90	90
take	9	29	49	69	89

from	87	86	83	81	85
take	39	58	66	79	50

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MULTIPLICATION. Sect. VII.

STATEMENT.

Once 7 is 7.	7 times 7 are 49.
2 times 7 are 14.	8 times 7 are 56.
3 times 7 are 21.	9 times 7 are 63.
4 times 7 are 28.	10 times 7 are 70.
5 times 7 are 35.	11 times 7 are 77.
6 times 7 are 42.	12 times 7 are 84.

Ques. 1. 7 years and 7 years are how many times 7 years? How many years?

2. Then 2 times 7 years are how many years?

3. 7 eggs and 7 eggs and 7 eggs are how many times 7 eggs? How many eggs?

4. Then 3 times 7 eggs are how many eggs?

5. 7 dogs and 7 dogs and 7 dogs and 7 dogs are how many times 7 dogs? How many dogs?

6. Then 4 times 7 dogs are how many dogs?

7. 7 days and 7 days and 7 days and 7 days and 7 days are how many times 7 days? How many days?

8. Then 5 times 7 days are how many days?

9. 6 times 7 mills are how many mills?

10. 7 times 7 cents are how many cents?

11. 8 times 7 dimes are how many dimes?

12. 9 times 7 dollars are how many dollars?

13. 10 times 7 books are how many books?

14. 11 times 7 pounds are how many pounds?

15. 12 times 7 tons are how many tons?

16. Since there are 7 days in 1 week, how many times 7 days are there in 8 weeks? How many days?

17. How many times 7 days are there in 11 weeks? How many days?

18. How many days are equal to 6 weeks?

19. Twice 7 are how many? once 7? 3 times 7? 4 times 7? 5 times 7? 6 times 7? 7 times 7? 8 times 7? 9 times 7? 10 times 7? 11 times 7? 12 times 7?

EXERCISES FOR THE SLATE.

mult.	7	7	7	7	7	7
by	2	3	1	4	5	6

mult.	7	7	7	7	7	7
by	7	8	9	10	11	12

DIVISION. Sect. VII.

STATEMENT.

7 in 7 *once*.	7 in 49 *seven* times.
7 in 14 *twice*.	7 in 56 *eight* times.
7 in 21 *three* times.	7 in 63 *nine* times.
7 in 28 *four* times.	7 in 70 *ten* times.
7 in 35 *five* times.	7 in 77 *eleven* times.
7 in 42 *six* times.	7 in 84 *twelve* times.

Ques. 1. How many times 7 apples in 7 apples?

2. How many times 7 apples can you take from 14 apples? Then how many times 7 apples in 14 apples?

3. How many times can you take 7 cents from 21 cents? Then how many times 7 cents in 21 cents?

4. How many times can you take 7 dollars from 28 dollars? Then how many times 7 dollars in 28 dollars?

5. How many pieces, each 7 inches long, can you cut from a stick which is 35 inches long? Then how many times 7 inches in 35 inches?

6. In 42 days how many times 7 days? Then how many weeks in 42 days, since it takes 7 days to make a week?

7. In 49 days how many times 7 days? How many weeks?

8. In 56 days how many times 7 days? How many weeks?

9. In 63 pounds how many times 7 pounds?

10. In 70 tons how many times 7 tons?

11. In 77 days how many times 7 days? How many weeks?

12. In 84 days how many times 7 days? How many weeks?

13. When the price of an orange is 7 cents, how many oranges can you buy with 42 cents?

14. If 1 barrel of flour costs 7 dollars, how many barrels of flour can you buy with 63 dollars?

15. How many times 7 in 7? 7 in 14? 7 in 21? 7 in 28? 7 in 35? 7 in 42? 7 in 49? 7 in 56? 7 in 63? 7 in 70? 7 in 77? 7 in 84?

EXERCISES FOR THE SLATE.

7) 7 | 7) 14 | 7) 21 | 7) 28

7) 35 | 7) 42 | 7) 49 | 7) 56

7) 63 | 7) 70 | 7) 77 | 7) 84

ADDITION. Sect. XIX.

STAT.   90 and 1 are 91; to be read,
ninety and *one* are *ninety-one.*

    90 and 2 are 92.   *Ninety-two.*
    90 and 3 are 93.   *Ninety-three.*
    90 and 4 are 94.   *Ninety-four.*
    90 and 5 are 95.   *Ninety-five.*
    90 and 6 are 96.   *Ninety-six.*
    90 and 7 are 97.   *Ninety-seven.*
    90 and 8 are 98.   *Ninety-eight.*
    90 and 9 are 99.   *Ninety-nine.*
    90 and 10 are 100.   *One hundred.*

QUES. 1. How many are 90 and 1 ? 91
and 1? 92 and 1? 93 and 1? 94 and 1? 95
and 1? 96 and 1? 97 and 1? 98 and 1? 99
and 1?

   2. How many are 90 and 2? 90 and 3?
90 and 4? 90 and 5? 90 and 6? 90 and 7?
90 and 8? 90 and 9? 90 and 10?

   3. How many *tens* are 8 tens and 1 ten?
How many *units?*   Then 80 and 10 are how
many?

   4. How many *tens* are 8 tens and 2 tens?
How many *units?*   Then 80 and 20 are how
many?

   5. How many *tens* are 5 tens and 5 tens?

How many *units?* Then 50 and 50 are how many?

6. 60 and 10 are how many? 70 and 10? 80 and 10? 90 and 10?

7. 50 and 20 are how many? 60 and 20? 70 and 20? 80 and 20?

8. 65 and 5 are how many? 75 and 5? 85 and 5? 95 and 5?

EXERCISES FOR THE SLATE.

Ninety-one.	Ninety-two.	Ninety-three.	Ninety-four.	Ninety-five.
91.	92.	93.	94.	95.

Ninety-six.	Ninety-seven.	Ninety-eight.	Ninety-nine.	One hundred.
96.	97.	98.	99.	100.

add 3 tens	30 units	5 tens	50
and 4 tens	40 units	3 tens	30
and 3 tens	30 units	1 ten	10

add 35	25	33	29	32
and 35	45	33	39	32
and 25	20	33	29	32

add 49	50	48	47	46
and 49	50	48	47	46

SUBTRACTION. Sect. XIX.

STAT.   1 from 100 leaves 99 ; to be read,
one from *one hundred* leaves *ninety-nine.*

2 from 100 leaves 98.   *Ninety-eight.*
3 from 100 leaves 97.   *Ninety-seven.*
4 from 100 leaves 96.   *Ninety-six.*
5 from 100 leaves 95.   *Ninety-five.*
6 from 100 leaves 94.   *Ninety-four.*
7 from 100 leaves 93.   *Ninety-three.*
8 from 100 leaves 92.   *Ninety-two.*
9 from 100 leaves 91.   *Ninety-one.*
10 from 100 leaves 90.   *Ninety.*

QUES. 1.   1 from 91 leaves how many? 2
from 92? 3 from 93? 4 from 94? 5 from 95?
6 from 96? 7 from 97? 8 from 98? 9 from
99? 10 from 100?

2.   100 less 1 are how many? 99 less 1?
98 less 1? 97 less 1? 96 less 1? 95 less 1?
94 less 1? 93 less 1? 92 less 1? 91 less 1?

3.   100 less 2 are how many? 100 less 3?
100 less 4? 100 less 5? 100 less 6? 100 less 7?
100 less 8? 100 less 9? 100 less 10?

4.   100 less 99 are how many? 100 less 98?
100 less 97? 100 less 96? 100 less 95? 100
less 94? 100 less 93? 100 less 92? 100 less
91? 100 less 90?

5. 99 less 98 are how many ? 98 less 97 ?
97 less 96 ? 96 less 95 ? 95 less 94 ? 94 less
93 ? 93 less 92 ? 92 less 91 ? 91 less 90 ?

6. 5 tens from 10 tens leaves how many
tens? How many *units?* Then 100 less 50
are how many ?

7. 100 less 10 are how many ? 100 less 20 ?
100 less 30 ? 100 less 40 ? 100 less 50 ? 100
less 60 ? 100 less 70 ? 100 less 80 ? 100
less 90 ?

EXERCISES FOR THE SLATE.

from 10 tens	100 units	10 tens	100
take 1 ten	10 units	2 tens	20

from 10 tens	100 units	10 tens	100
take 3 tens	30 units	4 tens	40

from 10 tens	100 units	10 tens	100
take 5 tens	50 units	6 tens	60

from 100	100	100	100	100
take 70	80	90	25	75

from 100	100	100	100	100
take 99	89	79	69	59

MULTIPLICATION. Sect. VIII.

STATEMENT.

Once 8 is 8.	7 times 8 are 56.
2 times 8 are 16.	8 times 8 are 64.
3 times 8 are 24.	9 times 8 are 72.
4 times 8 are 32.	10 times 8 are 80.
5 times 8 are 40.	11 times 8 are 88.
6 times 8 are 48.	12 times 8 are 96.

Ques. 1. 8 apples and 8 apples are how many times 8 apples? How many apples?

2. Then 2 times 8 apples are how many apples?

3. 8 men and 8 men and 8 men are how many times 8 men? How many men?

4. Then 3 times 8 men are how many men?

5. 8 boys and 8 boys and 8 boys and 8 boys are how many times 8 boys? How many boys?

6. Then 4 times 8 boys are how many boys?

7. 8 pins and 8 pins and 8 pins and 8 pins and 8 pins are how many times 8 pins? How many pins?

8. Then 5 times 8 pins are how many pins?

9. 6 times 8 inches are how many inches?

10. 7 times 8 feet are how many feet?

11. 8 times 8 yards are how many yards?

12. 9 times 8 rods are how many rods?

13. 10 times 8 furlongs are how many furlongs?

14. 11 times 8 miles are how many miles?

15. 12 times 8 days are how many days?

16. There are 8 furlongs in 1 mile. How many times 8 furlongs are there in 9 miles? How many furlongs?

17. How many furlongs in 7 miles?

18. There are 8 quarts in 1 peck, How many times 8 quarts in 11 pecks? How many quarts?

19. How many times 8 quarts in 4 pecks, or a bushel? How many quarts?

20. Twice 8 are how many? once 8? 3 times 8? 4 times 8? 5 times 8? 6 times 8? 7 times 8? 8 times 8? 9 times 8? 10 times 8? 11 times 8? 12 times 8?

EXERCISES FOR THE SLATE.

mult.	8	8	8	8	8	8
by	2	3	1	4	5	6

mult.	8	8	8	8	8	8
by	7	8	9	10	11	12

DIVISION. Sect. VIII.

Statement.

8 in 8 *once.*	8 in 56 *seven* times.
8 in 16 *twice.*	8 in 64 *eight* times.
8 in 24 *three* times.	8 in 72 *nine* times.
8 in 32 *four* times.	8 in 80 *ten* times.
8 in 40 *five* times.	8 in 88 *eleven* times.
8 in 48 *six* times.	8 in 96 *twelve* times.

Ques. 1. How many times 8 men in 8 men?

2. How many times can you take 8 inches from 16 inches? Then how many times 8 inches in 16 inches?

3. How many times can you take 8 feet from 24 feet? Then how many times 8 feet in 24 feet?

4. How many times can you take 8 yards from 32 yards? Then how many times 8 yards in 32 yards?

5. How many times can you take 8 miles from 40 miles? Then how many times 8 miles in 40 miles?

6. How many pieces, each 8 inches long, can you cut from a string which is 48 inches long? Then how many times 8 inches in 48 inches?

7. In 56 furlongs how many times 8 fur-

longs? How many miles, since 8 furlongs make 1 mile?

8. In 64 furlongs how many times 8 furlongs? How many miles?

9. In 72 furlongs how many times 8 furlongs? How many miles?

10. In 80 quarts how many times 8 quarts? How many pecks, since 8 quarts make 1 peck?

11. In 88 quarts how many times 8 quarts? How many pecks?

12. In 96 quarts how many times 8 quarts? How many pecks?

13. How many times 8 in 24? Why? *Because* 8 *and* 8 *and* 8, *or* 3 *times* 8, *are* 24.

14. 8 in 16 how many times? 8 in 8? 8 in 24? 8 in 32? 8 in 40? 8 in 48? 8 in 56? 8 in 64? 8 in 72? 8 in 80? 8 in 88? 8 in 96?

EXERCISES FOR THE SLATE.

8) 8 | 8) 16 | 8) 24 | 8) 32

8) 40 | 8) 48 | 8) 56 | 8) 64

8) 72 | 8) 80 | 8) 88 | 8) 96

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ADDITION. Sect. XX.

Write in figures on the slate the following numbers: —

101. One hundred and one.
102. One hundred and two.
103. One hundred and three.
104. One hundred and four.
105. One hundred and five.
106. One hundred and six.
107. One hundred and seven.
108. One hundred and eight.
109. One hundred and nine.
110. One hundred and ten.
111. One hundred and eleven.
112. One hundred and twelve.
113. One hundred and thirteen.
114. One hundred and fourteen.
115. One hundred and fifteen.
116. One hundred and sixteen.
117. One hundred and seventeen.
118. One hundred and eighteen.
119. One hundred and nineteen.
120. One hundred and twenty.
121. One hundred and twenty-one.
122. One hundred and twenty-two.
123. One hundred and twenty-three.
124. One hundred and twenty-four.
125. One hundred and twenty-five.

QUES. 1. 100 and 5 are how many? 100 and 10? 100 and 15? 100 and 20? 100 and 25?

2. 105 and 5? 105 and 10? 115 and 5? 120 and 5? 110 and 5? 110 and 10? 115 and 10?

EXERCISES FOR THE SLATE.

| add 34 | 35 | 36 | 37 | 38 |
| and 34 | 35 | 36 | 37 | 38 |
and 34	35	36	37	38

| add 39 | 40 | 41 | 50 | 55 |
| and 39 | 40 | 41 | 20 | 55 |
and 39	40	41	50	45

| add 51 | 52 | 53 | 54 | 55 |
and 51	52	53	54	55

| add 56 | 57 | 58 | 59 | 60 |
and 56	57	58	59	60

| add 61 | 62 | 109 | 89 | 77 |
and 61	62	9	19	38

SUBTRACTION. Sect. XX.

Ques. 1. 125 less 5? 120 less 5? 125 less 10? 120 less 10? 115 less 5? 115 less 10?

2. 105 less 5? 105 less 10? 100 less 10? 90 less 10? 80 less 10? 70 less 10? 60 less 10?

3. 125 less 100? 125 less 75? 125 less 50? 125 less 25?

EXERCISES FOR THE SLATE.

from *12 tens*	*120 units*	*12 tens*	*120*
take *11 tens*	*110 units*	*10 tens*	*100*

from *120*	*120*	*120*	*120*	*120*
take *90*	*80*	*70*	*60*	*50*

from *120*	*120*	*120*	*120*	*120*
take *40*	*30*	*20*	*10*	*99*

from *125*	*125*	*125*	*125*	*125*
take *15*	*35*	*45*	*55*	*65*

from *125*	*125*	*125*	*125*	*125*
take *75*	*85*	*95*	*105*	*115*

MULTIPLICATION. Sect. IX.

STATEMENT.

Once 9 is 9.	7 times 9 are 63.
2 times 9 are 18.	8 times 9 are 72.
3 times 9 are 27.	9 times 9 are 81.
4 times 9 are 36.	10 times 9 are 90.
5 times 9 are 45.	11 times 9 are 99.
6 times 9 are 54.	12 times 9 are 108.

QUES. **1.** 9 lemons and 9 lemons are how many times 9 lemons? How many lemons?

2. Then 2 times 9 lemons are how many lemons?

3. 9 oranges and 9 oranges and 9 oranges are how many times 9 oranges? How many oranges?

4. Then 3 times 9 oranges are how many oranges?

5. 9 trees and 9 trees and 9 trees and 9 trees are how many times 9 trees? How many trees?

6. Then 4 times 9 trees are how many trees?

7. 9 men and 9 men and 9 men and 9 men and 9 men are how many times 9 men? How many men?

8. Then 5 times 9 men are how many men?

9. 6 times 9 feet are how many feet ?

10. 7 times 9 days are how many days ?

11. 8 times 9 hours are how many hours ?

12. 9 times 9 miles are how many miles ?

13. 10 times 9 books are how many books ?

14. 11 times 9 sheep are how many sheep ?

15. 12 times 9 boys are how many boys ?

16. There are 9 square feet in 1 square yard. How many times 9 square feet in 7 square yards ? How many square feet ?

17. How many times 9 square feet in 11 square yards ? How many square feet ?

18. 9 and 9 and 9, or 3 times 9, are how many ?

19. Twice 9 are how many ? once 9 ? 3 times 9 ? 4 times 9 ? 5 times 9 ? 6 times 9 ? 7 times 9 ? 8 times 9 ? 9 times 9 ? 10 times 9 ? 11 times 9 ? 12 times 9 ?

EXERCISES FOR THE SLATE.

| mult. | 9 | 9 | 9 | 9 | 9 | 9 |
| by | 2 | 3 | 1 | 4 | 5 | 6 |

| mult. | 9 | 9 | 9 | 9 | 9 | 9 |
| by | 7 | 8 | 9 | 10 | 11 | 12 |

DIVISION. Sect. IX.

STATEMENT.

9 in 9 *once.*	9 in 63 *seven* times.
9 in 18 *twice.*	9 in 72 *eight* times.
9 in 27 *three* times.	9 in 81 *nine* times.
9 in 36 *four* times.	9 in 90 *ten* times.
9 in 45 *five* times.	9 in 99 *eleven* times.
9 in 54 *six* times.	9 in 108 *twelve* times.

Ques. **1.** How many times 9 apples in 9 apples?

2. How many times can you take 9 feet from 18 feet? Then how many times 9 feet in 18 feet?

3. How many times can you take 9 men from 27 men? Then how many times 9 men in 27 men?

4. How many times can you take 9 inches from 36 inches? Then how many times 9 inches in 36 inches?

5. How many times can you take 9 yards from 45 yards? Then how many times 9 yards in 45 yards?

6. How many times can you take 9 hours from 54 hours? Then how many times 9 hours in 54 hours?

7. How many times can you take 9 pins from 63 pins? Then how many times 9 pins in 63 pins?

8. How many times can you take 9 units from 72 units? Then how many times 9 units in 72 units?

9. How many times can you take 9 cents from 81 cents? Then how many times 9 cents in 81 cents?

10. How many times can you take 9 dollars from 90 dollars? Then how many times 9 dollars in 90 dollars?

11. How many times 9 square feet can you take from 99 square feet? Then how many square yards in 99 square feet, since it takes 9 square feet to make a square yard?

12. How many times 9 square feet in 108 square feet? How many square yards?

13. When the price of a pencil is 9 cents, how many pencils can you buy with 54 cents?

14. 9 in 18 how many times? 9 in 9? 9 in 27? 9 in 36? 9 in 45? 9 in 54? 9 in 63? 9 in 72? 9 in 81? 9 in 90? 9 in 99? 9 in 108?

EXERCISES FOR THE SLATE.

9)9	9)18	9)27	9)36
9)45	9)54	9)63	9)72
9)81	9)90	9)99	9)108

ADDITION. Sect. XXI.

Write in figures on the slate the following numbers:—

126. One hundred and twenty-six.
127. One hundred and twenty-seven. .
128. One hundred and twenty-eight.
129. One hundred and twenty-nine.
130. One hundred and thirty.
131. One hundred and thirty-one.
132. One hundred and thirty-two.
133. One hundred and thirty-three.
134. One hundred and thirty-four.
135. One hundred and thirty-five.
136. One hundred and thirty-six.
137. One hundred and thirty-seven.
138. One hundred and thirty-eight.
139. One hundred and thirty-nine.
140. One hundred and forty.
141. One hundred and forty-one.
142. One hundred and forty-two.
143. One hundred and forty-three.
144. One hundred and forty-four.
145. One hundred and forty-five.
146. One hundred and forty-six.
147. One hundred and forty-seven.
148. One hundred and forty-eight.
149. One hundred and forty-nine.
150. One hundred and fifty.

Ques. 1. How many are 125 and 10? 135 and 10? 120 and 10? 130 and 10? 140 and 10?

2. 125 and 5? 130 and 5? 135 and 5? 140 and 5? 145 and 5?

3. 125 and 15? 125 and 20? 125 and 25? 120 and 20? 120 and 30?

EXERCISES FOR THE SLATE.

add	42	43	44	45	46
and	42	43	44	45	46
and	42	43	44	45	46

add	47	48	49	50	100
and	47	48	49	50	25
and	47	48	49	50	25

| add | 63 | 64 | 65 | 66 | 67 |
| and | 63 | 64 | 65 | 66 | 67 |

| add | 68 | 69 | 70 | 71 | 75 |
| and | 68 | 69 | 70 | 71 | 75 |

SUBTRACTION. Sect. XXI.

Ques. 1. 150 less 10? 140 less 10? 130 less 10? 120 less 10? 110 less 10?

2. 150 less 20? 150 less 30? 150 less 40? 150 less 50? 150 less 100?

3. 150 less 5? 140 less 5? 130 less 5? 120 less 5? 110 less 5?

4. 145 less 5? 135 less 5? 125 less 5? 115 less 5? 105 less 5?

5. 150 less 25? 125 less 25? 100 less 25? 75 less 25? 150 less 75?

EXERCISES FOR THE SLATE.

from 150	150	150	150	150
take 140	130	120	110	100

from 150	150	150	150	150
take 90	80	70	60	50

from 150	150	150	150	150
take 40	30	20	10	25

from 150	150	150	150	150
take 75	125	149	138	127

MULTIPLICATION. Sect. X.

STATEMENT.

Once 10 is 10.	7 times 10 are 70.
2 times 10 are 20.	8 times 10 are 80.
3 times 10 are 30.	9 times 10 are 90.
4 times 10 are 40.	10 times 10 are 100.
5 times 10 are 50.	11 times 10 are 110.
6 times 10 are 60.	12 times 10 are 120.

Ques. 1. 10 mills and 10 mills are how many times 10 mills? How many mills?

2. Then 2 times 10 mills are how many mills?

3. 10 trees and 10 trees and 10 trees are how many times 10 trees? How many trees?

4. Then 3 times 10 trees are how many trees?

5. 10 men and 10 men and 10 men and 10 men are how many times 10 men? How many men?

6. Then 4 times 10 men are how many men?

7. 10 cents and 10 cents and 10 cents and 10 cents and 10 cents are how many times 10 cents? How many cents?

8. Then 5 times 10 cents are how many cents?

9. 6 times 10 desks are how many desks?

10. 7 times 10 books are how many books?

11. 8 times 10 towns are how many towns?

12. 9 times 10 pens are how many pens?

13. 10 times 10 miles are how many miles?

14. 11 times 10 maps are how many maps?

15. 12 times 10 ships are how many ships?

16. There are 10 mills in 1 cent. How many times 10 mills in 5 cents? How many mills?

17. How many times 10 mills in 7 cents? How many mills?

18. There are 10 cents in 1 dime. How many times 10 cents in 8 dimes? How many cents?

19. How many times 10 cents in 10 dimes? How many cents?

20. There are 10 dimes in 1 dollar. How many times 10 dimes in 6 dollars? How many dimes?

21. How many times 10 dimes in 9 dollars? How many dimes?

22. There are 10 dollars in 1 eagle. How many times 10 dollars in 4 eagles? How many dollars?

23. How many times 10 dollars in 12 eagles? How many dollars?

24. 10 and 10 and 10 and 10, or 4 times 10, are how many?

25. Twice 10 are how many? once 10?

3 times 10? 4 times 10? 5 times 10? 6 times
10? 7 times 10? 8 times 10? 9 times 10?
10 times 10? 11 times 10? 12 times 10?

EXERCISES FOR THE SLATE.

mult. 10	10	10	10	10	10
by 2	1	3	4	5	6

mult. 10	10	10	10	10	10
by 7	8	9	10	11	12

DIVISION. Sect. X.

STATEMENT.

10 in 10 *once.*	10 in 70 *seven* times.
10 in 20 *twice.*	10 in 80 *eight* times.
10 in 30 *three* times.	10 in 90 *nine* times.
10 in 40 *four* times.	10 in 100 *ten* times.
10 in 50 *five* times.	10 in 110 *eleven* times.
10 in 60 *six* times.	10 in 120 *twelve* times.

QUES. 1. How many times 10 feet in 10
feet?

2. How many times can you take 10 feet from 20 feet? Then how many times 10 feet in 20 feet?

3. How many times can you cut a piece 10 inches long from a string 30 inches long? Then how many times 10 inches in 30 inches?

4. How many times can you take 10 mills from 40 mills? Then how many times 10 mills in 40 mills? Since 10 mills make 1 cent, how many cents in 40 mills?

5. How many times can you take 10 mills from 50 mills? Then how many times 10 mills in 50 mills? How many cents?

6. How many times can you take 10 cents from 60 cents? Then how many times 10 cents in 60 cents? Since 10 cents make 1 dime, how many dimes in 60 cents?

7. How many times can you take 10 cents from 70 cents? Then how many times 10 cents in 70 cents? How many dimes?

8. How many times can you take 10 dimes from 80 dimes? Then how many times 10 dimes in 80 dimes? Since 10 dimes make 1 dollar, how many dollars in 80 dimes?

9. How many times can you take 10 dimes from 90 dimes? Then how many times 10 dimes in 90 dimes? How many dollars?

10. How many times can you take 10 cents

from 100 cents? Then how many times **10** cents in 100 cents or 1 dollar?

11. How many times can you take 10 dollars from 110 dollars? Then how many times 10 dollars in 110 dollars? Since 10 dollars make 1 eagle, how many eagles in 110 dollars?

12. How many times can you take 10 dollars from 120 dollars? Then how many times 10 dollars in 120 dollars? How many eagles?

13. How many times 10 in 60? Why? *Because* 10 *and* 10 *and* 10 *and* 10 *and* 10, *or* 6 *times* 10, *are* 60.

14. How many times 10 in 20? 10 in 10? 10 in 30? 10 in 40? 10 in 50? 10 in 60? 10 in 70? 10 in 80? 10 in 90? 10 in 100? 10 in 110? 10 in 120?

EXERCISES FOR THE SLATE.

$$10\,)\,\underline{10} \mid 10\,)\,\underline{20} \mid 10\,)\,\underline{30} \mid 10\,)\,\underline{40}$$

$$10\,)\,\underline{50} \mid 10\,)\,\underline{60} \mid 10\,)\,\underline{70} \mid 10\,)\,\underline{80}$$

$$10\,)\,\underline{90} \mid 10\,)\,\underline{100} \mid 10\,)\,\underline{110}$$

ADDITION. Sect. XXII.

Write in figures on the slate the following numbers: —

151. One hundred and fifty-one.
152. One hundred and fifty-two.
153. One hundred and fifty-three.
154. One hundred and fifty-four.
155. One hundred and fifty-five.
156. One huhdred and fifty-six.
157. One hundred and fifty-seven.
158. One hundred and fifty-eight.
159. One hundred and fifty-nine.
160. One hundred and sixty.
161. One hundred and sixty-one.
162. One hundred and sixty-two.
163. One hundred and sixty-three.
164. One hundred and sixty-four.
165. One hundred and sixty-five.
166. One hundred and sixty-six.
167. One hundred and sixty-seven.
168. One hundred and sixty-eight.
169. One hundred and sixty-nine.
170. One hundred and seventy.
171. One hundred and seventy-one.
172. One hundred and seventy-two.
173. One hundred and seventy-three.
174. One hundred and seventy-four.
175. One hundred and seventy-five.

12 *

Ques. 1. How many are 150 and 10?   160 and 10?   150 and 20?   140 and 30?   100 and 75?

2. 150 and 5?   155 and 5?   160 and 5? 165 and 5?   170 and 5?

3. 100 and 25?   125 and 25?   150 and 25? 125 and 50?   75 and 100?

4. 127 and 7?   137 and 7?   147 and 7? 157 and 7?   167 and 7?

EXERCISES FOR THE SLATE.

add 51	52	53	54	55
and 51	52	53	54	55
and 51	52	53	54	55

add 56	57	58	60	75
and 56	57	58	60	75
and 56	57	58	50	25

add 76	77	78	79	80
and 76	77	78	79	80

add 81	82	83	84	85
and 81	82	83	84	85

SUBTRACTION. Sect. XXII.

Ques. 1. 175 less 10? 170 less 10? 165 less 10? 160 less 10? 155 less 10?

2. 175 less 5? 170 less 5? 165 less 5? 160 less 5? 155 less 5?

3. 175 less 25? 175 less 50? 175 less 75? 150 less 25? 125 less 25?

4. 175 less 100? 175 less 125? 175 less 150? 170 less 20? 170 less 50?

EXERCISES FOR THE SLATE.

| from 175 | 175 | 175 | 175 |
| take 25 | 50 | 75 | 100 |

| from 175 | 175 | 175 | 175 |
| take 125 | 150 | 165 | 135 |

| from 175 | 175 | 175 | 175 |
| take 169 | 158 | 147 | 136 |

| from 174 | 175 | 173 | 172 |
| take 145 | 99 | 134 | 123 |

MULTIPLICATION. Sect. XI.

STATEMENT.

Once 11 is 11.	7 times 11 are 77.
2 times 11 are 22.	8 times 11 are 88.
3 times 11 are 33.	9 times 11 are 99.
4 times 11 are 44.	10 times 11 are 110.
5 times 11 are 55.	11 times 11 are 121.
6 times 11 are 66.	12 times 11 are 132.

QUES. **1.** 11 oranges and 11 oranges are how many times 11 oranges? How many oranges?

2. Then 2 times 11 oranges are how many oranges?

3. 11 inches and 11 inches and 11 inches are how many times 11 inches? How many inches?

4. Then 3 times 11 inches are how many inches?

5. 11 feet and 11 feet and 11 feet and 11 feet are how many times 11 feet? How many feet?

6. 4 times 11 feet are how many feet?

7. 11 rods and 11 rods and 11 rods and 11 rods and 11 rods are how many times 11 rods? How many rods?

8. 5 times 11 rods are how many rods?

9. 6 times 11 miles are how many miles?

10. 7 times 11 men are how many men?

11. 8 times 11 days are how many days?

12. 9 times 11 hours are how many hours?

13. 10 times 11 years are how many years?

14. 11 times 11 cents are how many cents?

15. 12 times 11 dollars are how many dollars?

16. If 1 barrel of beef costs 11 dollars, how many times 11 dollars would 6 barrels cost? How many dollars?

17. If 1 book costs 11 cents, how many times 11 cents would 9 books cost? How many cents?

18. 11 and 11 and 11 and 11 and 11 and 11 and 11, or 7 times 11, are how many?

19. Twice 11 are how many? once 11? 3 times 11? 4 times 11? 5 times 11? 6 times 11? 7 times 11? 8 times 11? 9 times 11? 10 times 11? 11 times 11? 12 times 11?

EXERCISES FOR THE SLATE.

mult.	11	11	11	11	11	11
by	2	1	3	4	5	6

mult.	11	11	11	11	11	11
by	7	8	9	10	11	12

DIVISION. Sect. XI.

STATEMENT.

11 in 11 *once.*	11 in 77 *seven* times.
11 in 22 *twice.*	11 in 88 *eight* times.
11 in 33 *three* times.	11 in 99 *nine* times.
11 in 44 *four* times.	11 in 110 *ten* times.
11 in 55 *five* times.	11 in 121 *eleven* times.
11 in 66 *six* times.	11 in 132 *twelve* times.

Ques. 1. How many times 11 apples in 11 apples?

2. How many times can you take 11 inches from 22 inches? Then how many times 11 inches in 22 inches?

3. How many times can you take 11 feet from 33 feet? Then how many times 11 feet in 33 feet?

4. How many times can you take 11 yards from 44 yards? Then how many times 11 yards in 44 yards?

5. How many times can you take 11 rods from 55 rods? Then how many times 11 rods in 55 rods?

6. How many times can you take 11 miles from 66 miles? Then how many times 11 miles in 66 miles?

7. How many times can you take 11 men

from 77 men ?   Then how many times 11 men
in 77 men ?

8. How many times can you take 11 trees
from 88 trees ?   Then how many times 11 trees
in 88 trees ?

9. How many times can you take 11 hours
from 99 hours ?   Then how many times 11
hours in 99 hours ?

10. How many times 11 days in 110 days ?

11. How many times 11 cents in 121 cents ?

12. How many times 11 dollars in 132
dollars ?

13. How many times 11 in 33 ?   Why ?
Because 11 *and* 11 *and* 11, *or* 3 *times* 11, *are*
33.

14. How many times 11 in 22 ?   Why ?
11 in 11 ?   11 in 33 ?   11 in 44 ?   11 in 55 ?
11 in 66 ?   11 in 77 ?   11 in 88 ?   11 in 99 ?
11 in 110 ?   11 in 121 ?   11 in 132 ?

EXERCISES FOR THE SLATE.

11) 11 | 11) 22 | 11) 33 | 11) 44

11) 55 | 11) 66 | 11) 77 | 11) 88

11) 99 | 11) 110 | 11) 121

ADDITION.   Sect. XXIII.

Write in figures on the slate the following numbers:—

176. One hundred and seventy-six.

177. One hundred and seventy-seven.

178. One hundred and seventy-eight.

179. One hundred and seventy-nine.

180. One hundred and eighty.

181. One hundred and eighty-one.

182. One hundred and eighty-two.

183. One hundred and eighty-three.

184. One hundred and eighty-four.

185. One hundred and eighty-five.

186. One hundred and eighty-six.

187. One hundred and eighty-seven.

188. One hundred and eighty-eight.

189. One hundred and eighty-nine.

190. One hundred and ninety.

191. One hundred and ninety-one.

192. One hundred and ninety-two.

193. One hundred and ninety-three.

194. One hundred and ninety-four.

195. One hundred and ninety-five.

196. One hundred and ninety-six.

197. One hundred and ninety-seven.

198. One hundred and ninety-eight.

199. One hundred and ninety-nine.

200. Two hundred.

Ques. **1.** How many are 170 and 10? 175 and 10? 180 and 10? 185 and 10? 190 and 10?

2. 175 and 5? 180 and 5? 185 and 5? 190 and 5? 195 and 5?

3. 175 and 25? 150 and 50? 100 and 100? 175 and 20? 160 and 30?

4. 158 and 8? 168 and 8? 178 and 8? 188 and 8? 198 and 8?

EXERCISES FOR THE SLATE.

add	59	60	61	62	63
and	59	60	61	62	63
and	59	60	61	62	63

add	64	65	66	75	65
and	64	65	66	75	75
and	64	65	66	50	45

| add | 88 | 89 | 90 | 91 | 92 |
| and | 88 | 89 | 90 | 91 | 92 |

| add | 93 | 94 | 95 | 96 | 97 |
| and | 93 | 94 | 95 | 96 | 97 |

SUBTRACTION. Sect. XXIII.

Ques. 1. 200 less 10 ? 190 less 10 ? 180 less 10 ? 170 less 10 ? 160 less 10 ?

2. 200 less 20 ? 200 less 30 ? 200 less 40 ? 200 less 50 ? 200 less 60 ?

3. 200 less 5 ? 190 less 5 ? 180 less 5 ? 170 less 5 ? 160 less 5 ?

4. 195 less 5 ? 185 less 5 ? 175 less 5 ? 165 less 5 ? 155 less 5 ?

5. 200 less 25 ? 200 less 75 ? 200 less 100 ? 200 less 125 ? 200 less 150 ?

EXERCISES FOR THE SLATE.

| from 200 | 200 | 200 | 200 |
| take 100 | 50 | 150 | 75 |

| from 200 | 200 | 200 | 200 |
| take 125 | 175 | 199 | 135 |

| from 200 | 200 | 200 | 200 |
| take 111 | 122 | 133 | 155 |

| from 200 | 200 | 200 | 200 |
| take 144 | 166 | 177 | 188 |

MULTIPLICATION. Sect. XII.

STATEMENT.

Once 12 is 12.	7 times 12 are 84.
2 times 12 are 24.	8 times 12 are 96.
3 times 12 are 36.	9 times 12 are 108.
4 times 12 are 48.	10 times 12 are 120.
5 times 12 are 60.	11 times 12 are 132.
6 times 12 are 72.	12 times 12 are 144.

Ques. **1.** 12 apples and 12 apples are how many times 12 apples? How many apples?

2. Then 2 times 12 apples are how many apples?

3. 12 inches and 12 inches and 12 inches are how many times 12 inches? How many inches?

4. Then 3 times 12 inches are how many inches?

5. 12 months and 12 months and 12 months and 12 months are how many times 12 months? How many months?

6. Then 4 times 12 months are how many months?

7. 12 men and 12 men and 12 men and 12 men and 12 men are how many times 12 men? How many men?

8. Then 5 times 12 men are how many men?

9. 12 trees and 12 trees and 12 trees and 12 trees and· 12 trees and 12 trees are how many times 12 trees? How many trees?

10. Then 6 times 12 trees are how many trees?

11. Since 12 inches make 1 . foot, how many times 12 inches in 7 feet? How many inches?

12. Then 7 times 12 inches are how many inches?

13. How many times 12 inches in 8 feet? How many inches?

14. Then 8 times 12 inches are how many inches?

15. How many times 12 inches in 9 feet? How many inches?

16. Then 9 times 12 inches are how many inches?

17. Since 12 months make a year, how many times 12 months in 10 years? How many months?

18. Then 10 times 12 months are how many months?

19. How many times 12 months in 11 years? How many months?

20. Then 11 times 12 months are how many months?

21. How many times 12 months in 12 years? How many months?

22. Then 12 times 12 months are how many months?

23. If you pay 12 cents for a slate, how many times 12 · cents must you pay for 6 slates? How many cents?

24. Since 12 things make 1 dozen, how many times 12 things in 7 dozen? How many things?

25. How many times 12 eggs in 9 dozen? How many eggs?

26. 7 times 12 are how many? Why? *Because* 12 *and* 12 *and* 12 *and* 12 *and* 12 *and* 12 *and* 12 *are* 84.

27. Twice 12 are how many? once 12? 3 times 12? 4 times 12? 5 times 12? 6 times 12? 7 times 12? 8 times 12? 9 times 12? 10 times 12? 11 times 12? 12 times 12?

EXERCISES FOR THE SLATE.

| mult. | 12 | 12 | 12 | 12 | 12 | 12 |
| by | 2 | 1 | 3 | 4 | 5 | 6 |

| mult. | 12 | 12 | 12 | 12 | 12 | 12 |
| by | 7 | 8 | 9 | 10 | 11 | 12 |

13*

DIVISION.   Sect. XII.

Statement.

12 in 12 *once.*	12 in 84 *seven* **times.**
12 in 24 *twice.*	12 in 96 *eight* **times.**
12 in 36 *three* times.	12 in 108 *nine* times.
12 in 48 *four* times.	12 in 120 *ten* times.
12 in 60 *five* times.	12 in 132 *eleven* times.
12 in 72 *six* times.	12 in 144 *twelve* times.

Ques. 1. How many times 12 inches in 12 inches?

2. How many times can you take 12 inches from 24 inches? Then how many times 12 inches in 24 inches? Since 12 inches make 1 foot, how many feet in 24 inches?

3. How many times can you take 12 inches from 36 inches? Then how many times 12 inches in 36 inches? How many feet?

4. How many times can you take 12 inches from 48 inches? Then how many times 12 inches in 48 inches? How many feet?

5. How many times can you take 12 inches from 60 inches? Then how many times 12 inches in 60 inches? How many feet?

6. How many times can you take 12 months from 72 months? Then how many times 12 months in 72 months? Since 12

months make 1 year. now many years in 72 months ?

7. How many times can you take 12 months from 84 months? Then how many times 12 months in 84 months? How many years ?

8. How many times can you take 12 months from 96 months? Then how many times 12 months in 96 months? How many years ?

9. How many times can you take 12 apples from 108 apples? Then how many times 12 apples in 108 apples? Since 12 things make 1 dozen, how many dozen of apples in 108 apples ?

10. How many times can you take 12 eggs from 120 eggs? Then how many times 12 eggs in 120 eggs? How many dozen of eggs in 120 eggs ?

11. How many times can you take 12 men from 132 men? Then how many times 12 men in 132 men?

12. How many times can you take 12 cents from 144 cents? Then how many times 12 cents in 144 cents ?

13. If 1 inkstand costs 12 cents, how many inkstands could you buy with 84 cents?

14. How many times 12 in 60? Why?

Because 12 *and* 12 *and* 12 *and* 12 *and* 12, *or*
5 *times* 12, *are* 60.

15. 12 in 24 how many times? 12 in 12?
12 in 36? 12 in 48? 12 in 60? 12 in 72?
12 in 84? 12 in 96? 12 in 108? 12 in 120?
12 in 132? 12 in 144?

EXERCISES FOR THE SLATE.

12) 12	12) 24	12) 36
12) 48	12) 60	12) 72
12) 84	12) 96	12) 108
12) 120	12) 132	12) 144
9) 108	7) 84	10) 120
6) 72	11) 132	8) 88
9) 81	11) 121	8) 96

ADDITION. REVIEW I.

REMARK. In these *reviews* the pupil should be ready to answer each question *at once* from memory, without going through the process of adding, or subtracting, &c.

2 and 2	3 and 2	4 and 2	5 and 2	6 and 2
2 and 4	3 and 4	4 and 4	5 and 5	6 and 6
2 and 3	3 and 6	4 and 6	5 and 9	6 and 10
2 and 5	3 and 3	4 and 8	5 and 3	6 and 8
2 and 6	3 and 5	4 and 3	5 and 8	6 and 4
2 and 9	3 and 7	4 and 5	5 and 4	6 and 9
2 and 7	3 and 10	4 and 9	5 and 6	6 and 3
2 and 10	3 and 8	4 and 7	5 and 10	6 and 7
2 and 12	3 and 11	4 and 12	5 and 7	6 and 11
2 and 11	3 and 9	4 and 11	5 and 11	6 and 5
2 and 13	3 and 12	4 and 13	5 and 14	6 and 12
2 and 14	3 and 14	4 and 14	5 and 19	6 and 14
2 and 16	3 and 16	4 and 17	5 and 12	6 and 13
2 and 15	3 and 13	4 and 15	5 and 18	6 and 19
2 and 17	3 and 15	4 and 18	5 and 13	6 and 15
2 and 19	3 and 17	4 and 19	5 and 17	6 and 18
2 and 18	3 and 19	4 and 16	5 and 15	6 and 16
2 and 20	3 and 18	4 and 20	. 5 and 20	6 and 20
7 and 2	8 and 2	9 and 2	10 and 2	11 and 2
7 and 5	8 and 8	9 and 9	10 and 10	11 and 11
7 and 9	8 and 12	9 and 11	10 and 12	11 and 13
7 and 7	8 and 3	9 and 13	10 and 3	11 and 3
7 and 12	8 and 11	9 and 3	10 and 13	11 and 14
7 and 3	8 and 4	9 and 14	10 and 4	11 and 4
7 and 11	8 and 13	9 and 4	10 and 11	11 and 15
7 and 4	8 and 5	9 and 15	10 and 5	11 and 6
7 and 8	8 and 14	9 and 5	10 and 14	11 and 16
7 and ´6	8 and 6	9 and 16	10 and 6	11 and 5
7 and 10	8 and 15	9 and 6	10 and 15	11 and 17
7 and 13	8 and 7	9 and 17	10 and 7	11 and 7
7 and 16	8 and 16	9 and 7	10 and 16	11 and 18
7 and 18	8 and 9	9 and 18	10 and 8	11 and 8
7 and 14	8 and 17	9 and 8	10 and 17	11 and 19
7 and 17	8 and 19	9 and 19	10 and 9	11 and 10
7 and 19	8 and 10	9 and 10	10 and 18	11 and 12
7 and 15	8 and 18	9 and 12	10 and 19	11 and 9
7 and 20	8 and 20	9 and 20	10 and 20	11 and 20

SUBTRACTION. REVIEW L.

3 less 2	13 less 3	5 less 4	6 less 5	7 less 6
6 less 2	5 less 3	14 less 4	15 less 5	16 less 6
8 less 2	14 less 3	6 less 4	7 less 5	8 less 6
4 less 2	6 less 3	15 less 4	16 less 5	17 less 6
10 less 2	15 less 3	7 less 4	8 less 5	9 less 6
5 less 2	4 less 3	16 less 4	17 less 5	18 less 6
12 less 2	7 less 3	8 less 4	9 less 5	10 less 6
7 less 2	16 less 3	17 less 4	18 less 5	19 less 6
13 less 2	8 less 3	9 less 4	10 less 5	11 less 6
9 less 2	19 less 3	18 less 4	19 less 5	20 less 6
14 less 2	9 less 3	10 less 4	11 less 5	12 less 6
11 less 2	18 less 3	19 less 4	20 less 5	21 less 6
15 less 2	10 less 3	11 less 4	14 less 5	13 less 6
19 less 2	12 less 3	20 less 4	21 less 5	22 less 6
16 less 2	11 less 3	12 less 4	12 less 5	14 less 6
18 less 2	20 less 3	21 less 4	22 less 5	23 less 6
17 less 2	17 less 3	13 less 4	13 less 5	15 less 6
20 less 2	21 less 3	22 less 4	23 less 5	24 less 6
30 less 2	40 less 3	50 less 4	60 less 5	70 less 6
8 less 7	9 less 8	10 less 9	11 less 10	12 less 11
17 less 7	18 less 8	19 less 9	20 less 10	21 less 11
9 less 7	10 less 8	11 less 9	12 less 10	13 less 11
18 less 7	19 less 8	20 less 9	21 less 10	22 less 11
10 less 7	11 less 8	12 less 9	13 less 10	14 less 11
19 less 7	20 less 8	21 less 9	22 less 10	23 less 11
11 less 7	12 less 8	13 less 9	14 less 10	15 less 11
20 less 7	21 less 8	22 less 9	23 less 10	24 less 11
12 less 7	13 less 8	14 less 9	15 less 10	16 less 11
21 less 7	22 less 8	23 less 9	24 less 10	25 less 11
13 less 7	14 less 8	15 less 9	16 less 10	17 less 11
22 less 7	23 less 8	24 less 9	25 less 10	26 less 11
14 less 7	15 less 8	16 less 9	17 less 10	18 less 11
23 less 7	24 less 8	25 less 9	26 less 10	27 less 11
15 less 7	16 less 8	17 less 9	18 less 10	19 less 11
24 less 7	25 less 8	26 less 9	27 less 10	28 less 11
16 less 7	17 less 8	18 less 9	19 less 10	20 less 11
25 less 7	26 less 8	27 less 9	28 less 10	29 less 11
30 less 7	40 less 8	50 less 9	60 less 10	70 less 11

MULTIPLICATION. Review L

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

DIVISION. Review L

2 in 4	3 in 9	5 in 20	9 in 45
2 in 24	3 in 12	4 in 24	5 in 50
3 in 6	1 in 8	6 in 24	3 in 3
2 in 8	4 in 12	4 in 28	10 in 50
1 in 12	3 in 15	7 in 28	5 in 55
4 in 8	5 in 15	1 in 3	11 in 55
2 in 10	3 in 18	4 in 32	5 in 60
5 in 10	6 in 18	8 in 32	12 in 60
2 in 12	3 in 21	4 in 36	10 in 100
6 in 12	7 in 21	9 in 36	5 in 5
4 in 20	1 in 9	1 in 6	10 in 110
2 in 14	3 in 24	4 in 40	11 in 110
7 in 14	8 in 24	10 in 40	10 in 120
2 in 16	3 in 27	4 in 44	12 in 120
8 in 16	4 in 4	11 in 44	1 in 4
1 in 2	9 in 27	4 in 48	6 in 36
2 in 18	3 in 30	12 in 48	6 in 42
9 in 18	10 in 30	1 in 10	7 in 42
2 in 20	3 in 33	9 in 81	1 in 7
10 in 20	11 in 33	9 in 90	6 in 48
8 in 8	9 in 9	10 in 90	8 in 48
2 in 22	3 in 36	2 in 2	6 in 54
11 in 22	12 in 36	9 in 99	9 in 54
7 in 49	8 in 64	11 in 99	6 in 60
7 in 56	8 in 72	9 in 108	10 in 60
8 in 56	9 in 72	12 in 108	6 in 66
7 in 63	7 in 7	11 in 11	12 in 24
12 in 12	8 in 80	5 in 25	11 in 66
9 in 63	10 in 80	5 in 30	6 in 72
7 in 70	8 in 88	6 in 30	12 in 72
10 in 70	11 in 88	5 in 35	1 in 11
7 in 77	8 in 96	7 in 35	11 in 121
11 in 77	12 in 96	5 in 40	4 in 4
7 in 84	10 in 10	8 in 40	11 in 132
2 in 6	4 in 16	6 in 6	12 in 132
12 in 84	4 in 20	5 in 45	12 in 144

ADDITION. Review II.

3 and 8	8 and 7	3 and 12	4 and 13
4 and 11	5 and 8	5 and 6	7 and 6
6 and 9	9 and 5	10 and 9	9 and 9
8 and 5	4 and 6	4 and 8	11 and 2
3 and 9	5 and 7	12 and 9	3 and 13
12 and 8	3 and 11	2 and 8	6 and 11
4 and 7	4 and 12	11 and 3	4 and 15
5 and 9	3 and 7	8 and 9	12 and 6
7 and 12	6 and 8	6 and 4	5 and 3
9 and 7	7 and 11	10 and 8	13 and 3
6 and 5	3 and 10	3 and 5	2 and 9
3 and 15	9 and 7	2 and 18	2 and 7
8 and 4	3 and 6	5 and 10	13 and 6
5 and 14	13 and 2	4 and 14	5 and 15
7 and 9	4 and 16	2 and 11	9 and 12
2 and 14	5 and 12	7 and 10	4 and 10
5 and 4	8 and 6	8 and 5	7 and 8
13 and 7	9 and 4	9 and 10	5 and 13
3 and 16	11 and 7	10 and 11	7 and 8
8 and 8	2 and 13	3 and 17	2 and 6
4 and 9	4 and 5	12 and 7	5 and 16
5 and 11	6 and 15	2 and 10	9 and 6
10 and 10	11 and 5	8 and 12	5 and 13
3 and 14	9 and 2	7 and 6	9 and 14
11 and 4	3 and 18	9 and 11	11 and 10
10 and 6	11 and 8	11 and 11	10 and 5
5 and 17	7 and 14	12 and 4	9 and 15
7 and 13	2 and 16	2 and 12	6 and 4
4 and 3	13 and 4	6 and 6	12 and 3
12 and 5	6 and 7	9 and 13	6 and 13
7 and 4	8 and 11	11 and 6	2 and 17
8 and 10	5 and 19	13 and 3	13 and 8
5 and 18	6 and 12	4 and 17	4 and 18
6 and 14	8 and 13	8 and 14	8 and 15
11 and 9	9 and 15	13 and 9	6 and 15
13 and 5	11 and 12	16 and 8	12 and 12

14

SUBTRACTION. Review II.

4 less 2	17 less 2	12 less 8	16 less 6
7 less 3	14 less 4	14 less 3	11 less 8
9 less 5	12 less 5	11 less 5	12 less 6
19 less 6	13 less 7	7 less 5	17 less 5
15 less 4	19 less 10	16 less 9	8 less 3
12 less 6	15 less 11	9 less 7	15 less 3
9 less 3	8 less 5	11 less 8	7 less 5
13 less 6	15 less 7	12 less 3	18 less 4
8 less 5	9 less 6	17 less 9	13 less 5
19 less 12	19 less 15	18 less 15	17 less 14
20 less 5	20 less 12	20 less 13	20 less 6
7 less 4	8 less 4	14 less 6	12 less 9
6 less 3	14 less 9	13 less 4	10 less 3
11 less 7	14 less 11	18 less 5	16 less 4
12 less 10	10 less 7	11 less 9	17 less 10
10 less 5	17 less 6	16 less 3	16 less 5
15 less 6	15 less 8	9 less 4	17 less 8
11 less 6	11 less 3	14 less 8	6 less 3
17 less 7	10 less 6	15 less 9	18 less 6
14 less 9	12 less 4	16 less 8	13 less 10
19 less 2	17 less 12	16 less 12	15 less 12
20 less 7	20 less 8	20 less 4	20 less 9
16 less 10	12 less 7	14 less 10	15 less 10
15 less 5	11 less 4	16 less 11	18 less 9
17 less 4	13 less 9	13 less 3	17 less 11
13 less 8	9 less 2	19 less 4	16 less 13
18 less 9	19 less 11	18 less 10	14 less 7
13 less 11	18 less 11	19 less 5	16 less 4
10 less 4	20 less 10	18 less 7	19 less 7
14 less 5	19 less 9	19 less 3	16 less 7
19 less 8	17 less 3	15 less 2	17 less 13
13 less 2	5 less 3	18 less 3	20 less 11
20 less 3	20 less 15	20 less 2	20 less 16

MULTIPLICATION. Review II.

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

DIVISION. REVIEW II.

2 in 4	3 in 3	2 in 10	6 in 6
3 in 21	3 in 9	4 in 24	2 in 12
5 in 45	4 in 28	7 in 77	3 in 24
2 in 8	6 in 54	9 in 72	12 in 84
6 in 66	11 in 44	11 in 88	4 in 8
8 in 40	12 in 60	2 in 18	11 in 22
10 in 60	9 in 81	12 in 132	5 in 60
4 in 36	7 in 49	2 in 6	10 in 40
2 in 20	5 in 25	4 in 20	6 in 24
11 in 99	3 in 27	11 in 66	9 in 90
3 in 33	6 in 30	8 in 56	7 in 14
7 in 35	11 in 11	9 in 18	12 in 96
6 in 42	8 in 88	5 in 10	8 in 24
2 in 24	9 in 45	3 in 15	4 in 40
7 in 63	2 in 18	11 in 121	12 in 72
3 in 6	4 in 32	9 in 99	4 in 4
8 in 64	8 in 72	5 in 35	8 in 16
10 in 10	3 in 12	7 in 28	11 in 110
4 in 12	6 in 36	4 in 16	3 in 36
9 in 27	9 in 99	12 in 24	2 in 22
5 in 15	5 in 40	2 in 16	8 in 8
10 in 100	10 in 70	6 in 60	10 in 50
6 in 12	7 in 21	9 in 108	5 in 20
12 in 120	12 in 48	11 in 33	7 in 42
10 in 30	11 in 77	8 in 32	6 in 18
2 in 14	3 in 30	10 in 90	9 in 63
7 in 7	8 in 48	8 in 96	9 in 54
3 in 18	10 in 110	5 in 55	6 in 72
11 in 132	7 in 70	9 in 36	12 in 36
5 in 30	4 in 44	4 in 48	6 in 48
10 in 20	12 in 108	10 in 80	10 in 120
12 in 12	3 in 24	7 in 84	7 in 56
5 in 50	8 in 80	11 in 55	12 in 144

UNITED STATES MONEY.

COPPER COINS.

The Half-cent, value 5 mills.
The Cent, value 10 mills

SILVER COINS.

The Half-dime, value 5 cents.
The Dime, value 10 cents.
The Quarter of a Dollar, value 25 cents.
The Half-dollar, value 50 cents.
The Dollar, value 100 cents.

GOLD COINS.

The Quarter-eagle, value two dollars and fifty cents.
The Half-eagle, value five dollars.
The Eagle, value ten dollars.

10 mills (m.)	make	1 cent,	marked	ct.
10 cents	"	1 dime,	"	d.
10 dimes	"	1 dollar,	"	$
10 dollars	"	1 eagle,	"	E.

ENGLISH MONEY.

4 farthings (f.)	make	1 penny,	marked	d.
12 pence	"	1 shilling,	"	s.
20 shillings	"	1 pound,	"	£
20 shillings	"	1 sovereign,	"	so.
21 shillings	"	1 guinea,	"	g.

4 shillings and 6 pence are equal to 1 dollar.
1 shilling is equal to 22 cents and 2 mills.
1 pound is equal to 4 dollars, 44 cents, and 4 mills.
The sovereign is received at our banks for $4.83.

14*

TROY WEIGHT.

24 grains (gr.)	make	1 pennyweight,	marked	dwt.
20 pennyweights	"	1 ounce,	"	oz.
12 ounces	"	1 pound,	"	lb.

Gold, silver, platina, diamonds and other precious stones, are weighed by this.

ASSAY WEIGHT.

GOLD.

4 grains (gr.)	make	1 carat,	marked	c.
24 carats	"	1 pound,	"	lb.

SILVER.

20 pennyweights (dwt.)	make	1 ounce,	marked	oz.
12 ounces	"	1 pound,	"	lb.

APOTHECARIES WEIGHT.

20 grains (gr.)	make	1 scruple,	marked	sc., or Э
3 scruples	"	1 dram,	"	dr., or Ʒ
8 drams	"	1 ounce,	"	oz., or Ʒ
12 ounces	"	1 pound,	"	lb., or ℔

Medicines are mixed by this weight, but drugs are usually bought and sold by avoirdupois weight.

AVOIRDUPOIS WEIGHT.

16 drams (dr.)	make	1 ounce,	marked	oz.
16 ounces	"	1 pound,	"	lb.
28 pounds	"	1 quarter,	"	qr.
4 quarters, or 112 lbs.	"	1 hund. weight,	"	cwt.
20 hundred weight	"	1 ton,	"	T.

This weight is used for all coarse things, — groceries, butter, cheese, meat, bread, &c., — and all metals except gold, silver, and platina.

CLOTH MEASURE.

2¼ inches (inch.)	make	1 nail,	marked	n.
4 nails, or 9 inches	"	1 quarter,	"	qr.
4 quarters	"	1 yard,	"	yd.
3 quarters	"	1 Flemish ell,	"	F. e.
5 quarters	"	1 English ell,	"	En. e.
6 quarters	"	1 French ell,	"	Fr. e.

LINEAL OR LONG MEASURE.

12 inches (in.)	make	1 foot,	marked	ft.
3 feet	"	1 yard,	"	yd.
6 feet	"	1 fathom,	"	fth.
5½ yards, or 16½ ft.	"	1 rod,	"	rod.
40 rods	"	1 furlong,	"	fur
8 furlongs, or 1760 yds.	"	1 mile,	"	m.
3 miles	"	1 league,	"	lea.

Distances, and things where length only is considered, are measured by this.

SUPERFICIAL OR SQUARE MEASURE.

144 square inches	make	1 square foot.
9 square feet	"	1 sq. yard.
30¼ sq. yards, or 272¼ sq. ft.,	"	1 sq. rod.
40 sq. rods	"	1 sq. rood.
160 rods, or 4 roods,	"	1 acre.
640 acres	"	1 sq. mile.

This is used for measuring all kinds of superficies or surfaces, such as land, paving, flooring, plastering, roofing, slating, and whatever has but the two dimensions usually called length and breadth.

A square foot has two dimensions, each 12 inches; thus a square foot contains 12 times 12, or 144 square inches: a square yard is 3 feet each way, and contains 3 times 3, or 9 feet. A square mile is 320 rods each way, and thus contains 320 times 320 rods, or 640 acres.

CUBIC OR SOLID MEASURE.

1728 cubic inches	make	1 cubic foot.
27 cubic feet	"	1 cubic yard.
40 cubic feet	"	1 ton of timber.
16 cubic feet	"	1 foot of wood.
128 cubic feet	"	1 cord of wood.
216 cub. feet, or 8 cub. yds.,	"	1 square of earth.

This is used to measure all kinds of solids, or things having three dimensions, usually called length, breadth, and depth or thickness.

A cubic foot has three dimensions, and is 12 inches each way; thus it has 12 times 12 times 12 inches, as above.

ALE AND BEER MEASURE.

2 pints (pt.)	make	1 quart,	marked	qt.
4 quarts	"	1 gallon,	"	gal.
9 gallons	"	1 firkin,	"	firk.
36 gallons, or 4 firk.,	"	1 barrel,	"	bbl.
54 gallons, or 6 firk.,	"	1 hogshead,	"	hhd.
2 hogsheads	"	1 butt,	"	butt.

By this, ale, beer, and porter are measured.

WINE MEASURE.

4 gills (gl.)	make	1 pint,	marked	pt.
2 pints	"	1 quart,	"	qt.
4 quarts	"	1 gallon,	"	gal.
31½ gallons	"	1 barrel,	"	bbl.
2 barrels, or 63 gals.,	"	1 hogshead,	"	hhd.
2 hogsheads, or 126 gals.,	"	1 pipe,	"	p.
2 pipes	"	1 tun,	"	tun.

By this, all kinds of spirits, as well as cider, mead, vinegar, oil, honey, molasses, &c., are measured.

DRY MEASURE.

2 pints (pt.)	make	1 quart,	marked	qt.
4 quarts	"	1 gallon,	"	gal.
2 gallons, or 8 qts.,	"	1 peck,	"	pk.
4 pecks	"	1 bushel,	"	bu.
36 bushels	"	1 chaldron,	"	ch.

By this, grain, fruit, salt, lime, sand, seeds, roots, shellfish, charcoal, &c., are measured.

MEASURE OF TIME.

60 seconds (s.)	make	1 minute,	marked	m.
60 minutes	"	1 hour,	"	h.
24 hours	"	1 day,	"	d.
7 days	"	1 week,	"	w.
4 weeks	"	1 lunar month,	"	l. m.
13 lunar months and 1 d.	"	1 civil year,	"	c. y.
12 calendar months	"	1 " "	"	c. y.
52 weeks and 1 d.	"	1 " "	"	c. y.
365 d. 5 h. 48 m. 57 s.	"	1 solar year,	"	s. y.
100 years	"	1 century,	"	cen.

The civil year consists of 365 days for 3 years together, and of 366 days every fourth, or leap year, because the solar year is nearly 365¼ days.

1.	January	31	days	7.	July	31 days.
2.	February	28 or 29	"	8.	August	31 "
3.	March	31	"	9.	September	30 "
4.	April	30	"	10.	October	31 "
5.	May	31	"	11.	November	30 "
6.	June	30	"	12.	December	31 "

Thirty days hath September,
April, June, and November.
February hath twenty-eight alone,
And all the rest have thirty-one.
But *leap year* coming once in four,
February then has one day more.

ANGULAR MEASURE, OR DIVISIONS OF THE CIRCLE.

60 seconds (")	make	1 minute,	marked	
60 minutes	"	1 degree,	"	°
30 degrees	"	1 sign,	"	sig.
90 degrees	"	1 quadrant,	"	qd.
12 signs, or 360°	"	1 circle,	"	cir.

In a great circle of the earth, 1 minute is equal to a mile, and 1 degree is 60 geographical miles, or 69½ English miles.

PAPER MEASURE.

24 sheets	make	1 quire,	marked	qu.
20 quires	"	1 ream,	"	rea.
2 reams	"	1 bundle,	"	bun.

VARIOUS MEASURES.

12 things	make	1 dozen,	marked	doz.
12 dozen	"	1 gross,	"	gro.
12 gross, or 144 doz.,	"	1 great gross,	"	gr. gro.
20 things	"	1 score,	"	sc.
5 score	"	1 hundred,	"	hund.

Eggs, oranges, lemons, buttons, &c., are sold by the dozen.

NUMERATION.

Learn the Table, and read the following numbers : —

millions.	hundred thousands.	ten thousands.	thousands.	hundreds.	tens.	units.
9,	4	8	5,	3	4	6

1.	65	21.	100,000
2.	106	22.	150,000
3.	350	23.	264,000
4.	423	24.	372,600
5.	7,000	25.	483,590
6.	6,008	26.	564,287
7.	8,060	27.	607,508
8.	4,500	28.	700,090
9.	3,270	29.	840,370
10.	9,999	30.	500,009
11.	10,000	31.	760,408
12.	10,007	32.	999,999
13.	10,056	33.	1,000,000
14.	10,642	34.	9,485,346
15.	10,430	35.	2,500,000
16.	10,509	36.	3,420,000
17.	34,000	37.	4,629,000
18.	68,300	38.	5,327,100
19.	75,430	39.	6,439,250
20.	99,999	40.	7,568,439

Write in figures on the slate the following numbers, and then read them from the slate: —

1. Fifty-three.
2. Two hundred and nine.
3. Three hundred and fifty.
4. Seven hundred and thirty-six.
5. Nine hundred and ninety-nine.
6. One thousand.
7. Two thousand and five.
8. Three thousand and twenty.
9. Four thousand and four hundred.
10. Five thousand seven hundred and fifty.
11. Six thousand five hundred and three.
12. Seven thousand six hundred and thirty-four.
13. Nine thousand nine hundred and ninety-nine.
14. Ten thousand.
15. Ten thousand and seven.
16. Thirty thousand and fifty-eight.
17. Forty-thousand two hundred and sixty-five.
18. Fifty-four thousand and ninety.
19. Ninety thousand nine hundred and ninety-nine.
20. One hundred thousand.
21. Two hundred thousand and five hundred.
22. Three hundred and fifty thousand two hundred and nine.
23. Four hundred and seven thousand and sixty-seven.
24. Nine hundred and ninety-nine thousand nine hundred and ninety-nine.
25. One million.
26. One million one thousand one hundred and one.

15

ADDITION.   Sect. XXIV.

333	542	342	796
222	523	487	328
444	532	964	145

837	503	639	567
294	280	284	678
303	768	573	890

4976	5678	6050	2345
8325	3456	7508	3456
4173	2050	3794	4567

5473	8573	37542
2856	6849	65938
8597	3685	24397
3649	7368	49879

84239	24683	878787
76542	42865	399339
69476	49789	524658

9281	3333	6798	3058
2739	9999	8976	2890
3546	8888	9687	8709

5423	6288	7777	2050
4257	3849	6666	8609
6853	7534	5555	4563

694323	305421	732194
263578	523456	187907
348950	280605	204050
432164	439038	530469

543761	835479	444444
234567	987654	999999
345678	876543	222222
456789	765432	666666

174123	654321	333333
532994	123456	777777
698346	234567	555555
325473	456789	888888

SUBTRACTION. SECT. XXIV.

347	498	964	676	897
126	347	633	445	673

442	565	868	753	657
326	347	739	657	347

754	667	839	958	657
362	386	478	576	387

800	807	750	909	687
355	569	475	899	498

3457	6254	7583	8465
1249	5109	6094	3708

9070	9508	9000	8543
6538	5069	6789	4757

56842	84329	65007	85060
27963	37456	33249	46545

| 76305 | 50084 | 80509 | 10568 |
| 58649 | 41156 | 58096 | 9679 |

| 90005 | 87563 | 67000 | 54392 |
| 80006 | 49678 | 38119 | 25846 |

| 70000 | 32546 | 80808 | 75342 |
| 69999 | 21729 | 61919 | 39587 |

| 85407 | 50048 | 63005 | 42653 |
| 68258 | 33369 | 40009 | 24836 |

| 695208 | 730052 | 1000000 |
| 527346 | 500063 | 899999 |

| 8888888 | 9515151 | 1536863 |
| 6191919 | 151515 | 1362636 |

| 4832105 | 3900642 | 5200004 |
| 1943206 | 600353 | 4010106 |

| 5000000 | 6548310 | 8181818 |
| 3111112 | 3659409 | 8090909 |

15*

MULTIPLICATION.   Sect. XIII.

Multiplicand	43	64	208
Multiplier	2	2	4
Product	86		

| 427 | 539 | 256 | 409 |
| 6 | 4 | 3 | 5 |

| 3060 | 4509 | 6703 | 2427 |
| 7 | 8 | 9 | 10 |

| 3720 | 4253 | 8600 | 9478 |
| 11 | 12 | 3 | 2 |

| 7045 | 62054 | 32409. | 2943 |
| 4 | 5 | 6 | 7 |

| 6824 | 50709 | 87965 | 4637 |
| 8 | 9 | 2 | 10 |

| 5608 | 94025 | 75638 | 5436 |
| 12 | 4 | 3 | 11 |

326	509	264	640
24	35	42	54
1304	2545	528	2560
652	1527	1056	3200
7824	17815	11088	34560

2573	3471	4763	5498
69	75	84	99

37584	64285	95452	52134
125	234	346	456

70032	80406	92103	12345
555	59	87	678

54006	78632	42896	32798
10	32	15	49

78695	78695	78695	78695
13	24	35	46

Multiply 59425 by 5, 7, 10, 12, 24, 36, 48, 57, 64, 79, 83, 94.

DIVISION. Sect. XIII.

*Prove the work of each of the following to be right by
multiplying the quotient by the divisor.*

Divisor 2)44 *Dividend*   3)69   4)84   5)105
         22   *Quotient*

6)606   7)847   8)968   9)1098

10)230   11)682   12)852   6)882

2)3574   3)1959   4)2612   5)1305

10)7840   11)6974   12)6432   5)9870

4)145728   7)528829   3)986487

9)1511552   6)587004   8)556696

12)6680264   10)543280   11)503096

6)6082184   2)9573148   7)6894762

3)5846439   9)8878383   4)2738312

10)7543200   8)7027064   5)9437560

11)2594504   10)9100650   12)8903508

Divisor 24)936(39 Quotient   46)9384(204 Quotient
   72   92
   216   184
   216   184

25)1625(37)1628(53)1431(

62)2542(78)4056(94)7050(

24)8348(32)8544(29)6032(

36)105948(47)162432(58)390630(

63)344106(79)384256(85)617695(

19)926307(44)3315444(27)1057914(

235)1004155(342)2881692(456)4451928(

207)3164066(129)1216728(425)2239000(

16)7123072(33)401511(212)1723136(

99)597168(77)523446(909)6059393(

MISCELLANEOUS.

1. Add 7963, 4052, 7856, 5409, 6542.

2. Add 89763, 45059, 36405, 64237.

3. From 987654 take 673218, 519763.

4. From 1279642 take 925882, 810089.

5. Multiply 68432 by 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.

6. Multiply 264397 by 2, 4, 3, 5, 7, 6, 9, 8, 11, 10, 12.

7. Multiply 369 by 24, 36, 42, 59, 65, 77, 99.

8. Multiply 24987 by 16, 18, 23, 34, 46, 57, 68.

9. Divide 672864 by 2, 4, 8.

10. Divide 846000 by 2, 4, 5, 6, 8, 10, 12, 24, 25.

11. Divide 7653893 by 13.

12. Divide 9128643 by 17, and prove, &c.

13. Divide 4246975 by 19, and multiply quotient by 19.

14. Divide 5867806 by 23.

15. Divide 6063148 by 26.

16. Divide 8130585 by 29.

17. Divide 7836583 by 31.

18. Divide 4681351 by 37.

19. Divide 534673 by 29.

20. Divide 10324 by 356.

21. Divide 18947 by 653.

22. Divide 645775 by 765.