
**A Key of Solutions to Examples in Eaton'S Common
School Arithmetic**

Eaton James H

Title: A Key of Solutions to Examples in Eaton'S Common School Arithmetic

Author: Eaton James H

This is an exact replica of a book. The book reprint was manually improved by a team of professionals, as opposed to automatic/OCR processes used by some companies. However, the book may still have imperfections such as missing pages, poor pictures, errant marks, etc. that were a part of the original text. We appreciate your understanding of the imperfections which can not be improved, and hope you will enjoy reading this book.









A

KEY OF SOLUTIONS

TO EXAMPLES IN

EATON'S HIGH SCHOOL ARITHMETIC.

BY

JAMES S. EATON, M. A.,

INSTRUCTOR IN PHILLIPS ACADEMY, ANDOVER, AND AUTHOR OF A
SERIES OF ARITHMETICS.



mc
BOSTON:

THOMPSON, BROWN & COMPANY,

25 AND 29 CORNHILL.

1873.

✓
Eating T 113,73.345

~~ET. 4385~~

~~Math 459.2.25~~

~~Educ T. 118.653~~

24 November 1858.

Gift of

Dr. Samuel A. Green.

Boston.

Entered, according to Act of Congress, in the year 1855, by

JAMES S. EATON, M.A.,

In the Clerk's Office of the District Court of the District of Massachusetts.

P R E F A C E .

HAVING received repeated and earnest solicitations from various teachers to furnish entire manuscript solutions of the examples in his High School Arithmetic, and numerous requests from all parts of the country for solutions of particular examples, the author has been constrained to issue this Key, not only in self-defense and in a spirit of kindness to that class of teachers who desire a Key, but from a conviction, induced by the nature of the many letters received asking for assistance, that the presentation of good modes of solution and explanation may suggest valuable ideas to many teachers, and through them benefit the pupils who are using the Arithmetic.

There are various methods of solving many of the examples. In every case much care has been exercised to adopt a good, clear, sensible solution; and, in many cases, two or three methods have been given, each having some advantages over the others, or one being adapted to one class of minds and another to another class.

Uniformity has not been sought, but variety rather; the design being to make the Key both plain and suggestive. A few diagrams have been inserted as furnishing the best suggestions that can be given for the solution of certain examples, and the teacher will readily draw upon the blackboard many other figures to facilitate the solution of other examples.

In many of the examples, for the sake of brevity, the numbers are

considered as *abstract* until the work is done, and then the result is *denominated* as the example requires. For illustration see Ex. 4, p. 22 of the Key.

In many of the examples where canceling may be performed the numbers have been arranged so as to show their *relations* and the *canceling* has not been performed, since it would be easier for any one to *cancel* than to *trace the process of canceling* performed by another. In examples where the canceling is *performed* in the Key, the numbers given in the example are connected by the proper *signs*, but the numbers obtained in the process of canceling have no signs connecting them. For illustration see Ex. 10, p. 22 of the Key.

It has not been thought best to *solve* all of the examples, such, e.g., as the greater part of those in the Simple Rules, many of those in Fractions, Compound Numbers, Interest, Extracting of Roots, etc. Of this class, if the answers are given in the Arithmetic they are omitted in the Key; if otherwise, they are inserted.

In Decimal Fractions the answers which can be given in full are so given, and others are given accurately to *five* decimal places.

Most of the examples in Interest after Note 1, p. 132 of the Arithmetic, are solved in accordance with that note.

In the Roots the operations are carried far enough to give the answers correctly for *five* decimal places. Where less than five are given, the following ones, if given, would be *zeros*.

Examples to which the above remarks do not apply will be readily understood by the teacher.

A

KEY OF SOLUTIONS

TO EATON'S ARITHMETIC.

NOTATION.

1.	(ART. 27, p. 6. French Method.)		1,314
2.			17,036,000
3.			65,000,004,000,006
4.			153,000,149,000,000,999,048,000,000,000,747,999
1.	(ART. 28. English Method.)		14,356257,525741
2.			2,005000,000000,000000,242752,000214
2.	(ART. 30. Roman Method.)		XVIII
3.		XXIX 6.	MCCCCXLVI
4.		XCIX 7.	MDCXLIV
5.		CCLXXXIV 8.	Variable.

ADDITION.

6.	(p. 8.)	5,071	16.	49,697,927
7.		44,680	17.	43,758,518
8.		4,015,807	18.	\$58,111
9.		7,247,140		
11.		485,466		
12.		1,635,205	19.	{ 1810, 7,239,814
13.		950,000		{ 1820, 9,638,191
14.		847,202		{ 1830, 12,860,702
15.		94,935	20.	{ 1840, 17,063,353
			21.	27,332,145
				64,230

6

KEY OF SOLUTIONS

23.	1,399	26.	2,169
24.	4,854	27.	6,416
25.	5,534	28.	\$17,740
	1st No.	476	
	3d No.	9,768	
29.	2d No.	<u>10,244</u>	= 1st + 3d
	5th No.	<u>20,488</u>	= 1st + 2d + 3d
	4th No.	<u>30,732</u>	= 2d + 5th
		71,708	Ans.
	Difference,	876,954	
	Less No.	<u>7,869,432</u>	
30.	Greater No.	<u>8,746,386</u>	} Ans.
	Sum,	16,615,818	}
31.	\$84,571,886	39.	\$6,720
32.	10,376,987,423	40.	8,373,648
33.	9,430,685,479	42.	6,077,235,573
34.	9,153,620,488	43.	666
35.	\$16,710.69	44.	\$274.90
36.	\$44,286.99	45.	\$120,290.03

SUBTRACTION.

7. (p. 16.)	2,488	21.	9,874,078
8.	691,115,393,909,047	22.	1,317
9.	7,827,262	23.	986,611
10.	766,795,129,248,583	24.	7,690,843,082
11.	577,749,851,324	25.	605
14.	3,204,647,054	26.	8,745,933
15.	1,750,425,049	27.	874,727
16.	3,172,681,168	28.	365
17.	1	29.	6,959
18.	69,842,374	30.	986,337
19.	197,802,198	31.	600,305
	2,145	32.	75,985,654

33.	930,000	37.	67
34.	1,910	38.	18
35.	80,048	39.	37,741
36.	29	40.	94,760,000

ADDITION AND SUBTRACTION.

1. (p. 18.) Bought of B,	113a.	(2.	3,694
" C,	254a.		78,769
" D,	74a.		876
" E,	396a.		4,327
Total bought,	837a.	1st Ans.	56
Sold to F,	75a.		87
" G,	200a.		87,809
Total sold,	275a.	2d Ans.	—354
Given to 1st son,	150a.		—869
" 2d son,	100a.		—473
Total given away,	250a.	3d Ans.	—63
Total sold and given away,	525a.		—6
Number of acres kept,	312a.	4th Ans.	—14
			—1,779
			Ans. 86,030

3.	6,269,988		
4.	{ \$850,000		{ 202,281,093
	{ \$83,721,886		{ 4,140,269
5.	Variable.		{ 12,591,294
	{ 6,538 years.	9.	{ 38,896,124
6.	{ 558 "		{ 13,322,521
	{ 5,980 "		{ 6,860,689
7.	{ 490,000		{ 10,959,682
	{ 4,675,000		{ 11,191,876
8.	{ 8,645,257		
	{ 6,731,009		