

**ROBINSON'S SHORTER COURSE.  
KEY TO THE COMPLETE  
ARITHMETIC: FOR TEACHERS  
AND PRIVATE LEARNERS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649621743

Robinson's Shorter Course. Key to the Complete Arithmetic: For Teachers and Private Learners  
by Daniel W. Fish

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

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

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

[www.triestepublishing.com](http://www.triestepublishing.com)

**DANIEL W. FISH**

**ROBINSON'S SHORTER COURSE.  
KEY TO THE COMPLETE  
ARITHMETIC: FOR TEACHERS  
AND PRIVATE LEARNERS**



Robinson's Shorter Course.

---

K E Y

TO THE

COMPLETE ARITHMETIC,

FOR

TEACHERS AND PRIVATE LEARNERS.

Fish, B. W.



IVISON, BLAKEMAN, TAYLOR & CO.,  
NEW YORK AND CHICAGO.

1876.

due T 118.76.400

HARVARD COLLEGE LIBRARY  
FROM THE GIFT OF  
CHARLES HENRY THORBER  
MAR 5 1929

ROBINSON'S  
SHORTER COURSE.

---

FIRST BOOK IN ARITHMETIC. PRIMARY.  
COMPLETE ARITHMETIC. In One volume.\*  
COMPLETE ALGEBRA.

ARITHMETICAL PROBLEMS. ORAL and WRITTEN.  
ALGEBRAIC PROBLEMS.

KEYS to COMPLETE ARITHMETIC and PROBLEMS, and  
to COMPLETE ALGEBRA and PROBLEMS,  
in separate volumes, for Teachers.

---

*Arithmetic, ORAL and WRITTEN, usually taught in  
THREE books, is now offered, complete and thorough,  
in ONE book, "THE COMPLETE ARITHMETIC."*

\* This COMPLETE ARITHMETIC is also published in TWO VOLUMES. PART I,  
and PART II, are each bound separately, and in CLOTH.

---

Copyright, 1874, by DANIEL W. FISH.

Electrotyped by SMITH & McDOUGAL, 82 BRICKEN ST., N. Y.



## PREFACE

A KEY to any mathematical work is not indispensably necessary to many teachers, but with the multiplicity of duties ordinarily devolving upon the teacher, time cannot always be had to answer or solve all questions that may be presented by the pupil. Hence a *key* becomes a great convenience, if not a necessity, in lessening the labor, and saving the time of the teacher, by presenting the shortest solution, and the best form of analysis, as a standard to which the pupil should be required to conform.

As *this key* has not been prepared for the *pupil*, but for the *teacher* and *private learner*, solutions of all the oral, and of many of the easier written examples are not included, and the operations are much abbreviated, the partial or intermediate results being often omitted, and the processes, for the most part, indicated by *signs*.





K E Y  
TO THE  
COMPLETE ARITHMETIC.

---

*Article 113.*

1.  $(\$1500 - \$960.90) \times 3 = \$1617.30$ , *Ans.*
2.  $(\$53.62 - \$46.45) \times 7 = \$50.19$ , *Ans.*
3.  $(\$9.12 \times 388) - \$2709 = \$829.56$ , *Ans.*
4.  $\$5670 - (\$7.25 \times 365) = \$3023.75$ , *Ans.*
5.  $126720 - 108800 = 17920$ , *Ans.*
6.  $23458 - 20580 = 2878$ , *Ans.*
7.  $620 \times 60 = 37200$ , *Ans.*
8.  $542 \times 279 = 151218$ , *Ans.*
9.  $\$15760 - \$8561.25 = \$7198.75$ , *Ans.*
10.  $\$3248 + \$10938 + \$4617 = \$18801$ , whole;  
 $\$10938 + \$4617 = \$15555$ , farm and stock.
11.  $(\$184.50 \times 48) - (\$4.80 \times 130) = \$8232$ , *Ans.*
12.  $\$1150 - (\$9 \times 125) = \$25$ , loss.
13.  $82050 - 5000 = 77050$ , *Ans.*
14.  $(97000 - 6000) + 1500 = 92500$ , *Ans.*
15.  $(\$73.46 - \$3.96) + \$1645 = \$1714.50$ , *Ans.*
16.  $\$25592.32 + (\$1759.50 \times 10) = \$43187.32$ , *Ans.*

*Art. 145.*

1.  $(2712 \div 113) \times 205 = 4920$ , *Ans.*
2.  $2124 \div 236 = 9$ , *Ans.*
4.  $\overline{36 + 114} \times \overline{5640 - 3007} = 394950$ , *Ans.*
5.  $30128 \div (4200 \div 75) = 538$ , *Ans.*
6.  $204 \times 378 \div 378 - 204 = 443\frac{3}{4}$ , *Ans.*
7.  $\$30.76 - (\$12.38 + \$7.62) = \$10.78$ , *Ans.*
8.  $(746 \times 23) - (19975 \div 25) = 16399$ , *Ans.*
9.  $(\$3000 - \$925.60) - \$2046.25 = \$28.15$ , *Ans.*
10.  $(75 \text{ cts.} \times 1600) \div 40 \text{ cts.} = 3000 \text{ lb.}$
11.  $(\$3376.25 - \$638.75) \div 365 = \$7.50$ , *Ans.*
12.  $170352 \div 4 = 42588$ , *Ans.*
13.  $(17605 \div 5) \times 204 = 718284$ , *Ans.*
14.  $(\$133 \times 28) \div (\$1500 - \$968) = 7 \text{ yr.}$ , *Ans.*
15.  $166656 \div 3 = 55552$ , *Ans.*
16.  $12624 \times 4 = 50496$ , *Ans.*
17.  $43950 \div 6 = 7325$ , *Ans.*
18.  $91864 \times 9 = 826776$ , *Ans.*
20.  $(\$ .60 + \$ .78 + \$ .90) \div 3 = \$ .76$ , *Ans.*
21.  $(\$104 + \$97 + \$128 + \$99) \div 4 = \$107$ , *Ans.*
22.  $(\$1500 + \$2976 + \$1895) \div 3 = \$2123\frac{1}{3}$ , *Ans.*
23.  $\$487.20 \div (\$25 - \$8.75 + \$4.65) = 42 \text{ weeks}$ , *Ans.*
24.  $(\$4578 - \$1642) \div 8 = \$367$ , *Ans.*
25.  $(\$75 \times 86 + \$54 \times 54) - \$7560 = \$1806$ , *Ans.*
26.  $\$6780 + \$8200 + \$8306 + (\$8306 - \$1345) = \$30247$ .

28.  $(5672 - 1974) \div 2 = 1849$ , less, *Ans.*  
 29.  $(\$1250 - \$190) \div 2 = \$530$ , carriage, *Ans.*  
 30.  $(3789 - 227) \div 2 = 1781$  votes, U. C., *Ans.*  
 31.  $(\$28475 - \$4625) \div 2 = \$11925$ , less sum, *Ans.*  
 32.  $(240 \div 5 + 10 + 15) \times 3 = 24$  boxes, *Ans.*  
 33.  $(\$2492 - \$1424) \div 3 = 356$  Cd.;  
 $\$1424 \div 356 = \$4$  cost, *Ans.*  
 34.  $(269 - 3 \div 14) + 37 - 43) \times 36 = 288$ , *Ans.*  
 35.  $(529 \times 6) \div 1587 = 2$ , *Ans.*  
 36.  $(15125 \div 3025 \times 48) \div 24 = 10$ , *Ans.*  
 37.  $4392 \div 4 + 378 = 1476$ , *Ans.*  
 38.  $510 \div 15 + 15 = 49$ , *Ans.*

**Art. 171.**

<i>10.</i>		10778		14877	
	3281	3	9843	10353	1
	2805	3	935	9048	2
	476	1	476	1305	3
	459	1	459	1218	2
<i>Ans.</i>	17	27	459	<i>Ans.</i>	87
					7
					609

<i>11.</i>		1116		1488	
	620	1	620	<i>Ans.</i>	124
	496	1	496		13
	124	4	496		
					1488
					1488

  

		5184		6914	
	396	13	5148	36	192
	396	11	36	36	18
					6912
					6912
					2, <i>Ans.</i>