WALSH-SUZZALLO ARITHMETICS; BY GRADES, EIGHTH YEAR

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649730827

Walsh-Suzzallo Arithmetics; By Grades, Eighth Year by John H. Walsh & Henry Suzzallo

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

All rights reserved.

Edited by Trieste Publishing Pty Ltd. Cover @ 2017

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

www.triestepublishing.com

JOHN H. WALSH & HENRY SUZZALLO

WALSH-SUZZALLO ARITHMETICS; BY GRADES, EIGHTH YEAR



WALSH-SUZZALLO ARITHMETICS

G

BY

JOHN H. WALSH

ASSOCIATE SUPERINTENDENT OF SCHOOLS THE CITY OF NEW YORK

AND

HENRY SUZZALLO

PROFESSOR OF THE PHILOSOPHY OF EDUCATION TEACHERS COLLEGE, COLUMBIA UNIVERSITY

By Grades
Eighth Year

D. C. HEATH & CO., PUBLISHERS BOSTON NEW YORK CHICAGO HARVARD UNIVERSITY
SHO DEPT. OF EDUCATION LIBRARY
GIFT OF THE PUBLISHER

JUN -6 1916

THE WALSH-SUZZALLO ARITHMETICS

Three-Book Course

- I. Fundamental Processes
- II. Essentials
- III. Business and Industrial Practice

Two=Book Course

- I. Fundamental Processes
- II. Practical Applications

Course by Grades

- I. Third Year Arithmetic
- II. Fourth Year Arithmetic
- III. Fifth Year Arithmetic
- IV. Sixth Year Arithmetic
- V. Seventh Year Arithmetic
- VI. Eighth Year Arithmetic

D. C. HEATH & CO., PUBLISHERS

COPYRIGHT, 1914 AND 1915, By D. C. Heath & Co.

PREFACE

THESE texts in arithmetic are devised to train children to meet the ordinary demands of life. Practical efficiency, rather than mental discipline, has been the chief aim in their organization. Whatever the average man needs to know in mathematical terms, because of its frequency of occurrence in his life or because of its urgency and importance, has been here included.

This volume gives drill and review of the essentials covered in the preceding books, and adds many special short methods of calculation that increase efficiency, but the chief aim is to extend the child's power to make practical applications of arithmetic to life.

In the upper grammar grades, the child comes to feel at ease in performing the fundamental processes, only to find their applications more complex than ever. Hence the pressing responsibility of the grammar grades is to teach the children to think. They must be taught to understand the important social institutions with which arithmetical processes are associated, for, without this comprehension, they cannot reason out the successive steps to be taken in solving practical problems. Hence a large part of this text is devoted to the simple social and economic applications of mathematics.

Since the dominant problem in these higher grades is different from that of the lower years, it is necessary that the teacher modify the traditional spirit of mathematical teaching. The work should be formal only in the slightest degree. It would contribute greatly to effective instruction if the teacher would constantly remember that economic, as contrasted with formal, arithmetic deals chiefly with applications, and these should be kept vital to the children taught. While many arithmetical processes are very important to all pupils the whole country over, their applications are not. Each process has many varied uses. Every child may need to know every fundamental operation, but not every application of the same.

Recent investigations show that two urgent demands are being made by practically all school superintendents:

(1) that fundamental processes be emphasized in the lower grades in order that early efficiency may result, and (2) that the social and economic applications of arithmetic be taught in the upper grades so that grammar school children will have an insight into the typical business practices of modern life. These texts are devised to meet both requirements.

CONTENTS

SECTION ONE - HO	USEHOLD PROBLEMS
PAGE	PAGE
CARRFUL SPRNDING 1	THE SCHOOL KITCHEN 5
APPORTIONING ONE'S INCOME 1	
CHECKING QUANTITIES AND	HOUSEHOLD EXPENSES 11
EXTENSIONS 5	HOUSEHOLD ACCOUNTS 11
HIGH COST OF LIVING 5	
	S APPLICATIONS, PROPOR-
Proportion 16	INTEREST TABLES 22
FINDING A MISSING TERM . 17	
DIRECT PROPORTION 18	
INVERSE PROPORTION 18	COMPOUND INTEREST 29
ALIQUOT PARTS 21	
SECTION THREE BU	SINESS MEASUREMENTS
AREA OF A RECTANGLE 81	VOLUME OF PRISM OR OF
ANGLES 85	CYLINDER 42
TRIANGLES	DEVELOPMENT (PATTERN) OF
AREA OF A PARALLELOGRAM 36	Рвівм 48
CIRCUMPERENCE OF CIRCLE . 37	CONVEX SURFACE 44
ARBA OF CIRCLE 39	ENTIRE SURPACE 44
CAPACITY AND VOLUME 40	CYLINDER 45
PRISMS AND CYLINDERS 41	
SECTION FOUR - EFFIC	HENCY IN CALCULATIONS
Business METHODS IN MUL-	SPECIAL PRODUCTS 58
TIPLICATION 49	REVIEW 54
Business Methods in Divi-	GRAPHS 65
BION	CROSS-RULED PAPER 66

CONTENTS

	AL BUSINESS COÖPERATION
PAGE	PAGE
THE MARKET PLACE 68	STANDARD TIME 100
COUPERATION IN SELLING . 69	Тімв Виля 101
Cooperation in Producing . 70	STANDARD TIME IN OTHER
THE EXCHANGES 73	COUNTRIES 102
SHARING EXPENSES 75	RAILBOAD TRAVEL 108
PARTNERSHIP 76	SOLAR TIME 107
CORPORATIONS 79	TRANSPORTING MERCHANDISE 108
STOCKS 82	PARCEL POST 108
Bonds 83	TRANSMITTING MONEY 111
ACCRUED INTEREST 85	ACCURATE INTEREST 116
SAFEGUARDING OUR BUSINESS	INTEREST-BEARING DEPOSITS. 118
INTERESTS 87	INTEREST LAWS 120
LIVE INSURANCE 88	Annual Interest 121
FIRE INSURANCE 90	COMPOUND INTEREST TABLES 122
TAXES 98	MISCELLANEOUS APPLICATIONS 128
Business Communications -	INTEREST BY SIX PER CENT
THE TRLEGRAPH 98	Митнор 126
TABLE OF SQUARE ROOTS . 129	FACTORS AND MULTIPLES . 181 EXTRACTING SQUARE ROOT . 138 CUBES AND CUBE ROOTS 188
	STRIAL APPLICATIONS
BOARD MEASURE 148 MATCHED BOARDS 160	CARPETING 158
	DEDUCTIONS FOR OPENINGS , 155
Siding 150	DIMENSIONS OF A TRIANGLE 157
Shingles 151	SECTORS AND SEGMENTS 160
LATHS 152	READING A WORKING DRAW-
PAINTING 162 WALL PAPER	ING 165
WALL PAPER 153	
SECTION EIGHT-EQ	UATIONS IN BUSINESS
FORMULAS 169	TRANSPOSING TERMS 180
PERCENTAGE EQUATIONS 172	CLEARING OF FRACTIONS 184
INTEREST EQUATIONS 178	REMOVING PARENTHESES 187
EQUATIONS IN GENERAL 176	FRACTIONAL TERMS 188
COLLECTING TERMS 177	- MASSIONED 1 1 1 100

ARITHMETIC

EIGHTH YEAR

SECTION I

HOUSEHOLD PROBLEMS

Careful Spending

It has been said that while almost anybody can make money, it takes a wise man to keep it. This does not mean that a man is considered wise because he accumulates money at the expense of proper living; it means that more judgment is required to manage what is earned than to earn it.

Apportioning One's Income

The accompanying table gives the average per cents spent for rent, for food, and for clothing by certain city families consisting of two adults and two children, and having yearly incomes as specified:

YEARLY INCOME	EXPENDITURES FOR				
	Rent	Food	Clothing	Total	
\$ 600	19 %	43 %	13%		
₿ 800	18%	42%	14 %		
\$ 1000	17 %	40 %	15%		
\$ 1200	17%	37 %	16 %		