

**INDUSTRIAL
ARITHMETIC FOR GIRLS'
TRADE SCHOOLS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649613069

Industrial Arithmetic for Girls' Trade Schools by Cleo Murtland & Mary L. Gardner

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

CLEO MURTLAND & MARY L. GARDNER

**INDUSTRIAL
ARITHMETIC FOR GIRLS'
TRADE SCHOOLS**

INDUSTRIAL ARITHMETIC

FOR GIRLS' TRADE SCHOOLS.



BONNAZ AND EMBROIDERY MACHINES.

0 NY W

INDUSTRIAL ARITHMETIC

FOR GIRLS' TRADE SCHOOLS

BY

MARY L. GARDNER

AND

CLEO MURTLAND

NEW YORK :: BOSTON :: CHICAGO
D. C. HEATH & COMPANY

1910

FOREWORD

THE makers of this Trade School Arithmetic assume that the pupils who use the book already have a working knowledge of all the necessary arithmetical processes. The emphasis, therefore, is laid upon the content of the problem, upon the meaning of the result obtained—its bearing upon the trade work or upon the subject under discussion. Hence only actual or *live* problems are presented, and a live interest in them may reasonably be expected.

Since the object of trade instruction is to produce a worker, who has acquired not merely the necessary mechanical skill, but who has learned to combine intelligence and interest with skill, great care has been taken in arranging these problems to dwell upon such features of the various trades as will be likely to arouse and stimulate the personal interest of the pupils.

Serving as a background for the purely trade problems are a number of significant industrial and civic problems. A few historical problems, also, are given to show the connection between past and present economic conditions, particularly those related to the trades in which women and girls are engaged.

The aims of the problems presented in this book are:

To give methods for hand work, such as The Planning of Sample Cards, The Making of Tucks, Hems, Folds or Hat Facings.

To stimulate in the pupils an interest in the kinds, the quantities used, and the cost, of materials handled.

To show how, under actual trade conditions, the costs, profits and losses are reckoned. (See problems in Dressmaking, Factory Sewing, The Cutting of Box Foundations, etc.) The fact that these costs, profits and losses vary, gives opportunity for the making of many new and live problems.

To give rudiments for the planning of work, as, for instance, cutting material without waste. (See Practical Estimates, pages 40 and 91, and How Saving Affects Profits, page 87.)

To add to the worker's interest in *earning* money, an interest in the wise *use* of money.

To direct the attention of trade pupils to some undesirable social conditions by means of such problems as those based on sweatshop work.

To arouse in dressmaking and millinery pupils an interest in the textiles upon which they work and to familiarize them with the history, the processes of cultivation and manufacture, and the commercial value of these fabrics.

That these aims are not impossible of realization

is being demonstrated in a gratifying measure by the work done in the Manhattan Trade School for Girls, where the pupils take a lively interest in the working out of such problems. They appreciate, to some extent at least, the connection of the problems with their industrial life.

The authors wish to express their sincere and grateful appreciation of the valuable assistance so generously given in the preparation of this work, by Prof. Mary Schenck Woolman, Miss Helen R. Hildreth, and the supervisors and trade teachers in the Manhattan Trade School for Girls. They wish also to recognize here the services of the merchants and manufacturers who contributed helpful material to that part of the work dealing with store and factory problems.

MARY L. GARDNER,
CLEO MURLAND.

New York City, October 1, 1910.

