AN ELEMENTARY TREATISE ON PLANE TRIGONOMETRY; WITH A NUMEROUS COLLECTION OF EXAMPLES, CHIEFLY DESIGNED FOR THE USE OF SCHOOLS AND BEGINNERS

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649509492

An Elementary Treatise on Plane Trigonometry; With a Numerous Collection of Examples, Chiefly Designed for the Use of Schools and Beginners by R. D. Beasley

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

R. D. BEASLEY

AN ELEMENTARY TREATISE ON PLANE TRIGONOMETRY; WITH A NUMEROUS COLLECTION OF EXAMPLES, CHIEFLY DESIGNED FOR THE USE OF SCHOOLS AND BEGINNERS

Trieste

PLANE TRIGONOMETRY.

39

5 S.S.

4

80 - E

 $\sim t$

.2

Č.

20

222 10 -----

12

 $\geq t$

AN ELEMENTARY TREATISE

4

ON

PLANE TRIGONOMETRY;

WITH

J. Numerous Collection of Examples,

CHIEFLY DESIGNED FOR THE USE OF SCHOOLS AND BEGINNERS.

.

22

BY

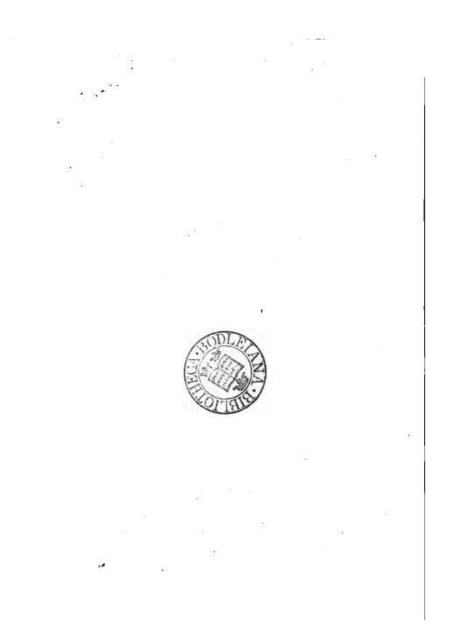
R. D. BEASLEY, M.A. PELLOW OF HT JOHN'S COLLEGE, CANDELDOF.

Cambridge : MACMILLAN AND CO. AND 23, HENRIETTA STREET, COVENT GARDEN, LONDON. 1858.

[The right of Translation is reserved.]

55

183. C. 23.



PREFACE.

THE following pages are specially intended for use in Schools. In the choice of matter I have been chiefly guided by the requirements of the three days' Examination at Cambridge, with the exception of proportional parts in logarithms, which I have omitted. In one point, I have ventured to deviate from the usual custom. I have denoted angles throughout by the Greek characters, even before the explanation of circular measure. My reasons for doing so were chiefly two ; first, that they are much more distinctly and easily written, and it is advisable that a boy should be accustomed in the text to the notation he uses on his paper; secondly, I am thus enabled to insert the algebraical symbols for the angles in the figures, a very great advantage in such propositions as that proved in Art, 27. I have added about 400 examples mainly collected from the Examination Papers of the last ten years, and I have taken great pains to exclude from the body of the work any which might dishearten a beginner by their difficulty.

In conclusion, I must express my great obligations to my friend the Rev. R. B. Mayor, of Rugby. Without his kind encouragement I should not have ventured to have offered these pages to the public; and I am indebted to him, not only for many valuable suggestions, but for a careful revision of the whole work.

R. D. BEASLEY.

ST JOHN'S COLLEGE, CAMBRIDGE, September, 1858.



1



CONTENTS.

8 i**t** (%) 6

2 ²

83

÷

Ξ÷

incruos.											- 53	PAGE		
I.	Units of Measur	STILET	t. T	Tae of	f Sim		- bra	M	eant	ner of				
1.	Units of Measurement. Use of Signs + and Meaning of the term "Angle" in Trigonometry. The Trigonometrical Ratios.													
	Practical App											I		
	Examples.			194949	17237-883	142303	125000-1		215	-05/2	2015	12		
		107.54		1	8	÷.	÷.		÷.	23		15		
1935	ann airtean		1	- N -		- Sie	532	50	i de la	12/10/	, ¹⁶	1		
П,	•••••••••••••••••••••••••••••••••••••••												3 2	
	amongst the Ratics. Change in Sign and Magnitude of the Ratics through the Four Quadrants. Change from Positive to													
										entras				
	Negative Infir	-5		IEF 1.1	ngono	mean	ICSI I	3008				18		
	Examples,		•	•	٠	•		÷.		80	•	37		
		B,	•3	•	٠	•	٠	198	16	•	•	30		
IIL	Trigonometrical .	Ratio	s of	the S	ums a	nd I	liffere	nces of	f An	gles, a	and			
	of Multiple A													
	gonometrical l				31 (NA)				3 . "			32		
	Examples.	Δ.	10	43	12		2	÷.		25	33	39		
	,,,		1	•	30	\sim						43		
IV.	Relations betwee	m th	e Sid	es an	d Ang	les o	faTr	iangle	. т	he Ra	sdii			
	of the Circums	cribe	d and	d Ine	cribed	Circ	les					48		
	Examples.	A.	•0	•0	•					105		54		
	, ,,	В,		S				1				55	15	
	0.1.0	1	10		-	-				P		11498		
۷.	Solution of Tria Application	ngies	. P	our	Jases.	10	er 11	eatme	at m	1 Page	ua,	58		
		- 33	•	•	(i)	20	30.	0.5		ं	98	1.5		
	Examples.	10000		•	3 0		٠	36	3		•	64 66		
	"	В.				•	2	•	۰.			00		
VI.	Logarithms. Their use. Advantage of Logarithms to Base 10.													
	Arrangement	of th	Tab	les.	Loga	rithn	us of t	be Tri	gond	metri	cal			
								- <u>1</u> - 2	÷.			68		
	Ratios .	•	•	•	•			12	17 C	0.0	22			
	Ratios . Examples.	А.	•	•		•			*	38 38	23 28	75		

CONTENTS.

1

/TT	Applie	ntion		Lores	ithm	. to	the S	alati		Trie	mede	. T		PAGE
		on						•			- Sic	•, •		77
		Exam												81
	-			B.				•	٠	٠	۲	٠	••	81
		"				S R .);		8	2			65		0.
ш.	Circul						saribe	d, az	d cir	CUTOS	ribe	d abo	ut a	
		le. A												
	1	Exam				•	•	•		3 9	24	1		88
		"		В.	•		(2)	30	\propto	۰	38	٠	٠	89
÷ ,	fiscell	neon	Er	ampl	eg ::	ano.		*	125	0 4	10		-02	91
•	1.00001.0	all coul		amp		9 9 .0			1					
	30											12		
	<u>80</u>	۲				100		¥8						
		». И.	٠	12	55	~ 1								
		8×												
					52									
	æ													
	10	25		•										
		2		14	8	÷.								
						11								
			•			9	•							
				12		·	1.12							
iβ5							135	20						
								c					50	
30														
			ä.			$\{c\}$	¥8	12						
		25	÷.	S.	82	123	18	33		108	* 2			
			lá.	24	62	\$ 0	22	90						
			1 <u>0</u>		10	£37	30	33				έŝ.		
	್ರ	-		6	*)	10	$\langle \mathbf{f} \rangle$	(1)						
	9.¥	34		1.42	Ξ.	83	22	30	\sim			(\mathbf{r})		
					- 23		30		4					
						10		-						

viii ñ

100