

AccessionIndex: TCD-SCSS-V.20121208.644

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Accession By: Prof.J.G.Byrne

Object name: Mathematical Tables contrived after a most comprehensive method ...

Vintage: c.1717

Synopsis: Briggs, Wallis, Halley & Sharp, A., Mount and Page: London.

**Description:**

Short descriptive text ...

For the front and rear covers, title pages, table of contents, selected content, etc, see Figure 1 onwards below.

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>  
Click '*Accession Index*' (1st column listed) for related folder, or '*About*' for further guidance. Some of the items below may be more properly part of other categories of this catalog, but are listed here for convenience.

Accession Index	Object with Identification
<a href="#">TCD-SCSS-V.20121208.644.01</a>	Mathematical Tables contrived after a most comprehensive method ..., 1717, Briggs, Wallis, Halley & Sharp, A., Mount and Page: London.

**References:**

1. References if required ...



*Figure 1: Mathematical Tables, Front Cover*





*Figure 2: Mathematical Tables, Rear Cover*





Figure 3: Mathematical Tables, Binding

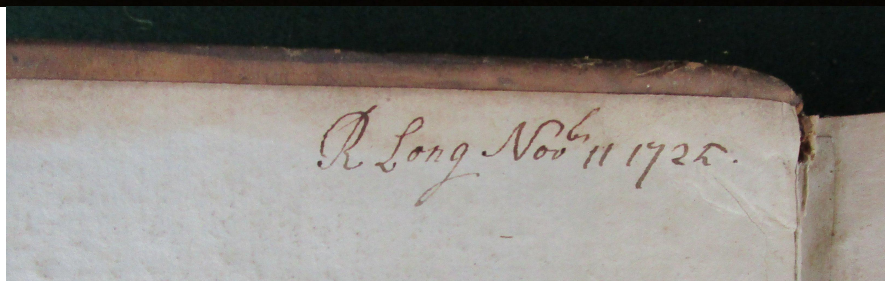
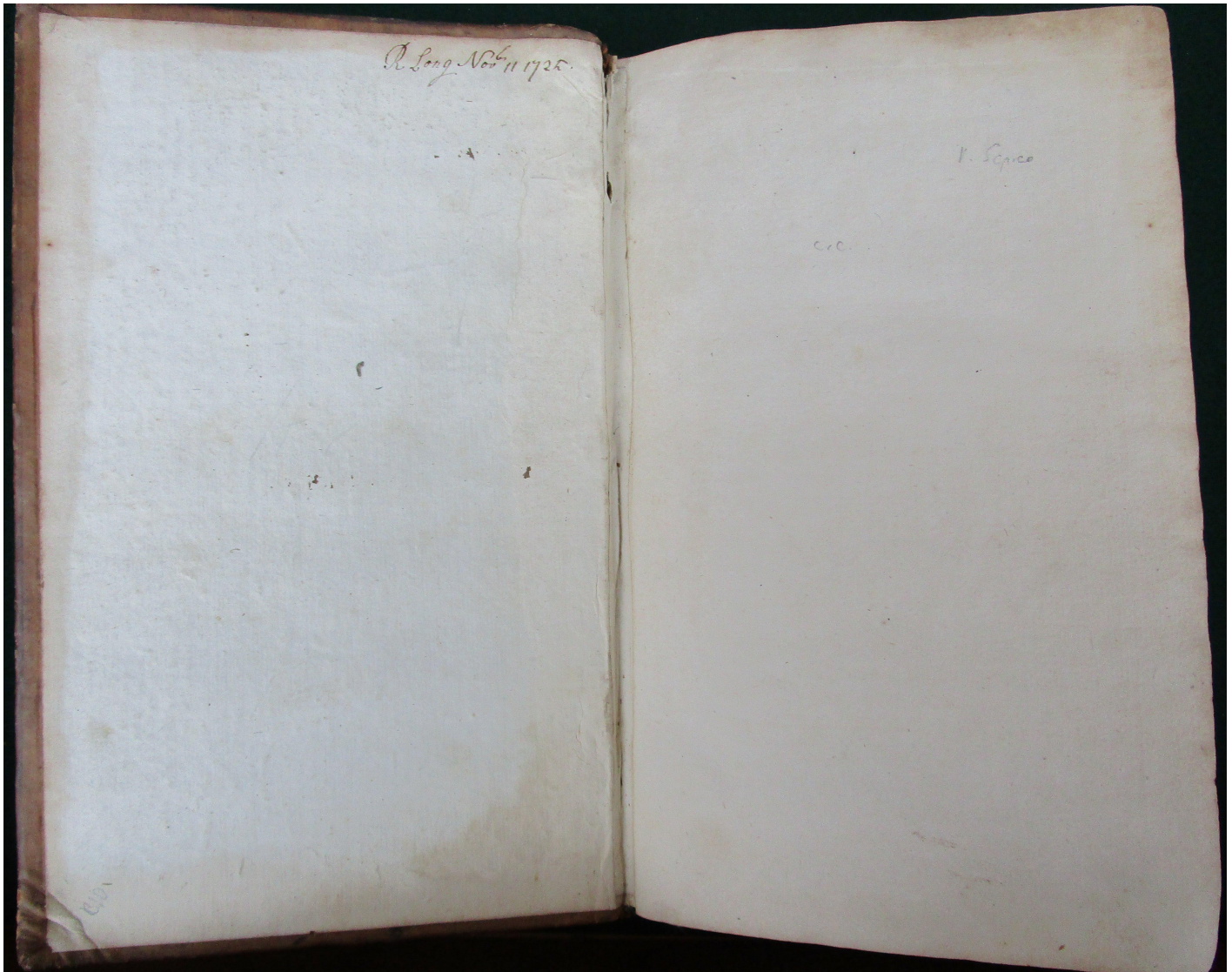


Figure 4: Mathematical Tables, inside front cover, with annotation  
"R Long Nov<sup>br</sup> 11 1722"



*Henry A. Young*

# Mathematical TABLES,

Contrived after a most Comprehensive Method:

VIZ;

A TABLE of Logarithms, from 1 to 101000.  
To which is added (upon the same Page) The  
Differences and Proportional Parts, whereby the  
Logarithm of any Number under 10,000,000 may  
easily be found.

TABLES of Natural Sines, Tangents, and  
Secants, with their Logarithms, and Logarithmick  
Differences to every Minute of the Quadrant.

TABLES of Natural Versed Sines, and their Loga-  
rithms, to every Minute of the Quadrant.

WITH THEIR

Construction and Use.

By { Mr. Briggs, } Savilian Professors of Geometry  
{ Dr. Wallis, } in the University of Oxford.  
{ Mr. Halley, }  
{ Mr. Abr. Sharp. }

LONDON:

Printed for R. and W. Mount, and T. Page, in  
Postern-Row, Tower-Hill. 1717.

*LG*  
*5.84*

*Henry A. Young*

# Mathematical TABLES,

Contrived after a most Comprehensive Method:

Figure 5: Mathematical Tables, Title Pages page 1 and page 2, with annotation on page 2  
“???”



To Mr. Edm. Halley, Savilian  
Professor of Geometry, in the  
University of Oxford.

S I R,

**I**T being universally acknowledged  
that by the Learned Professors of  
Geometry in the *Savilian Chair* (viz.  
Mr. Briggs, Dr. Wallis, and Your Self) the  
*Logarithmical Art* hath receiv'd its great-  
est Improvements, and the Use of  
those Numbers have by them been  
fully taught and divulged. 'Tis to  
You therefore, who succeed, and share  
equally with your Famous Predecessors  
in the same honourable Post<sup>e</sup> (and in  
Memory of them) that I think my self  
bound in Justice to present these Col-  
lections.

Mr. Briggs, with excessive Patience,  
Calculated Thirty one *Cibiliads* of these  
Decimal *Logarithms*, to Fourteen Places,  
also the *Sines*, *Tangents*, *Secants*, with the

A 2

Loga-

Figure 6: Mathematical Tables, Dedication Pages page 1



*The Dedication.*

*Logarithm Sines and Tangents*, and shewed their Construction and Use; of which Dr. Wallis gives a particular Account in the Twelfth Chapter of his *Algebra*, which is our Introduction.

Then I return you your own Compendious and Facile Method of Constructing the *Logarithms*, with the Reverse of that Noble Problem: And indeed, setting aside what is Printed from Mr. Briggs above-mentioned, or Mr. Abr. Sharp (to whom the World is indebted for their Industry in this kind) the rest of the Discourses, both before and after the Tables, are either Written or Chosen by your self; therefore I expect your kind Acceptance, and remain,

Sir,

Your very much Oblig'd

Humble Servant,

Hen. Sherwin.

London, July 12. 1705.

T H E

T H E  
P R E F A C E.

WERE the Construction and Use of the following Tables known to every body, they should come forth into the World without any Introductory Discourse; but as the Case stands, and that Knowledge is the share but of few, it may be proper to add something upon both those Heads: And what is here presented is Gathered from the most Celebrated Authors that have Improved these Subjects amongst our selves, viz. Mr. Briggs, Dr. Wallis and Mr. Halley, the Three Professors of Geometry in the Savilian Chair at Oxford: To lead the Reader on from the beginning, we give him the 12th Chapter of Dr. Wallis's *Algebra*, which treats of the Original of Logarithms, and gives a full History of their Progress. To this is subjoyn'd Mr. Halley's Compendious Method of making Logarithms, which proceeds abstractedly from the nature of Numbers without any regard to the Hyperbola; from which is deduced for Practice the making of the Natural, and Mr. Briggs's: With the further Prosecution of the same Subject, generously Communicated by the ingenious and unwearied Mr. Abr. Sharp, with his Table of Logarithms to above fifty Figures

Figure 7: Mathematical Tables, Dedication Pages page 2 and Preface Pages page 1



## The PREFACE.

Figures ; as also the Hyperbolick Logarithm of 10 to 80, and its Reciprocal, to 65. Then follows by the same Hand, the Construction of the Sines, Tangents and Secants ; with the whole Process of the Quadrature of the Circle to 72 Figures : Which Quadrature was invented, and here demonstrated, by the above-mentioned Mr. Halley.

To come to the principal Part of the Performance ; as to the Tables, we may venture to say ( without Partiality ) that we offer here a more compleat Set of them than can be found in any other Book now Extant, and doubt not, but upon careful Perusal, they will be found as Useful and Correct. The Method we observed in Printing the Logarithms is according to that Excellent Abbreviation of Dr. John Newton in his Trigonometria Brittannica ; to which is added, the Difference between each Logarithm, and the proportional Parts, in the last Column of the same Page ; by which the Logarithm of any Number ( & contra ) under 10,000,000 may be readily found, without turning to any other Page.

The manner of placing the Tables of natural Sines, Tangents and Secants, and their Logarithms, is absolutely New, and very Advantageous ; for to each Logarithm in those Tables are placed the differences which are common to the Column of Logarithms on both sides : By which the Seconds may be easily found. And for that end, between them and the Table of Logarithms, is placed a small Table to convert Sexagesimals into Decimals, and contrarily.

The

## The PREFACE.

The next and chief thing considerable in the Tables, is their Correctness ; and here we will give a particular Account of the Measures we took to make them so. As for the Table of Logarithms it was examined from 1 to 20000 and from 90000 to 101000 by Mr. Briggs's Arith. Logar. Printed at London 1624, and from 1 to 100,000 by Adrian Vlacq's Table, Printed at Goudæ 1628. And to shew our Care herein, as well as for Publick Service, we here place a Table of the Errors we found (when Correcting our own) in Mr. Briggs's and Vlacq's above-mentioned Canons ; and because Vlacq's own Errata Table is found in few of his Books (inasmuch that Dr. Newton's above-mentioned Canon is Printed with all his Errors ) therefore we thought it necessary to give it here with our Additions. Where Note, that such of his Errors as we now found are marked with (a), and a single one in Mr. Briggs's with (b) ; and those which are Common to Mr. Briggs and Vlacq are marked with (B.)

Num.	Logar.	Num.	Logar.	Num.	Logar.	Num.	Logar.	Num.	Logar.
80	B 99870	5126	86018	9482	3-97689	15306	17050	45000	02313
169	67046	5194	19453	9706	02870	15843	74212	48376	a 4-99556
183	2-26245	5222	68675	9972	B 22698	16461	62149	49502	a 27458
238	69721	6157	74961	9973	B 58150	17509	13427	49717	a 49148
580	2-76342	6267	17454	10058	16313	17773	4-44976	49880	62443
590	2-77085	6257	3-75636	10061	B 11490	17780	17566	66359	a 32706
968	2-98489	6841	95004	10096	92419	19009	92707	77756	a 4-76150
1229	B 13664	6941	20444	10292	B 97775	19107	25026	60600	69386
1298	B 46925	6977	B 3-84242	10847	96402	19113	88598	61099	a 4-79238
1309	9466	7775	3-89070	10850	98331	19155	81165	62060	a 16598
1321	28176	7830	3-89376	11003	11110	20832	a 4-31073	65160	10956
1354	86643	8077	B 00829	11332	65658	24862	a 4-60211	6759	a 4-82450
1359	94507	8556	3-93227	11440	B 00245	28423	a 4-5766	67650	a 4-82438
1626	B 05413	8642	42620	11469	4-05952	33000	4-52891	75632	a 4-86719
2167	a 89112	8832	97176	11920	4-07627	36560	61871	74832	a 73526
2434	05739	9174	3-66355	11955	95805	38780	78047	78700	47324
2534	B 66109	9176	34049	12358	26257	39844	a 4-60036	80212	97451
3144	71070	9182	3-96293	13274	16320	39845	a 4-60037	95066	b 4-06075
3329	37953	9317	3-96927	14020	18132	40598	4-60810	97105	a 15026
3499	39425	9354	73656	14527	80136	41018	a 4-60867	99628	a 4-96046
4599	34096	9429	2-97446	14763	59565	41490	a 24208	99600	B 58284
4926	75270	9480	2-07650	14782	46198	42508	a 02379	99910	18950
					B 07018	42556	a 08101	100000	a 47122

The

Figure 8: Mathematical Tables, Preface Pages page 2 and page 3



## The PREFACE.

The Tables of Natural Sines, Tangents and Secants were examined by those of Van Shooten, Printed at Amsterdam 1627 (which are said to be without one Fault) and Sir Jonas Moor's new System; the Tables of Logarithmick Sines, Tangents and Secants were examined by a Table of the said Vlacqs, in large Octavo, Printed at Gouda 1626, as also by the said System. And in all these Examinations there were never less than Two to harken, whilst One read over the Printed Sheet to be Corrected. The Table of Versed Sines was Printed from, and examin'd by the System above-mentioned, they being to be found no where else that I know of.

The Travers Table is new Calculated to a larger Radius than any Extant, and was examined with the greatest Care.

After the Tables follow the various Uses of Logarithms made plain to the meanest Capacity; To which is added, the Solution of Plain and Spherical Trigonometry by Logarithms, from Mr. Briggs's English Edition of his Logarithmical Arithmetick; and the Use of the Versed Sines from Sir Jonas Moor's above-mentioned System.

The Demonstration of Compound Interest, with some Propositions of Navigation, were both of them bestowed by Mr. Halley, and revised by him; as were most of the Sheets of the whole Discourse: wherein he was pleased to make many advantageous Alterations, for which I return him my hearty Thanks.

## ERRORS in the Discourses before the TABLES.

PAGE 24. line 11 and 12, for 4856939 read 4856935. / p. 26. l. 12, after Natural Log. insert [of 10]. / p. 28 in Log. of 14 latter end, for 146624 r. 140624. / p. 36. l. 40. at the latter end of the Log of 1 r. 62951. / p. 41. l. 10. make the 29th Figure [0] instead of 6, viz. for 92363 r. 92303. / p. 43. l. 2. for 1199.63392 r. 1199.63302. / l. 23. r. 00005805287516. / p. 47. l. 19. of the 2d. Table for 20622 r. 20922. in the Title of the 4th Table r. [Fractions]. p. 47. at the beginning of the last line insert [you have]. / p. 48. l. 8. r. prefix d. l. 9. for [these two Tables] r. [the two first Tables]. / p. 48. l. 12. blot out [in]. p. 49. l. 22. before [The Characteristicks] insert [Note] and r. [Logarithms]. p. 51. l. 18. for [10 deg.] r. [10 min]. p. 41. l. 2. for [and] r. [Sec.] p. 39. l. 9. for 376391. r. 376331. and l. 17. for 24X. r. Z+X.

### Errors in the Table of Logarithms.

Num.	for	Correct	Num.	Diff.	Correct
1175	170	070	1000	344	434
3185	403	503	4749	944	914
9933	987	997	7201	445	545
			9076	748	478

After the Tables, Page 5. Line 16. for 5.7242957 Read 5.7242997.

Figure 9: Mathematical Tables, Preface Pages page 4 and page 5



## ERRORS in the Discourses before the TABLES.

**P**AGE 24. line 11 and 12, for 4856939 read 4856935. / p. 26. l. 12, after Natural Log. insert [of 10]. / p. 28 in Log. of 14 latter end, for 146624 r. 140624. / p. 36. l. 40. at the latter end of the Log of  $\frac{1}{4}$  r. 62951. / p. 41. l. 10. make the 29th Figure [0] instead of 6, viz. for 92363 r. 92303, p. 43. l. 2. for 1199.63392 r. 1199.63302. / l. 23. r. 00005805287516. / p. 47. l. 19. of the 2d. Table for 20622 r. 20922. in the Title of the 4th Table r. [Fractions]. p. 47. at the beginning of the last line insert [you have]. p. 48. l. 8. r. prefix'd, l. 9. for [these two Tables] r. [the two first Tables] p. 48. l. 13. blot out [in]. p. 49. l. 22. before [The Characteristicks] insert [Note] and r. [Logarithms]. p. 51. l. 18. for [10 deg.] r. [10 min]. p. 41. l. 2. for [and] r. [&c.] p. 39. l. 9. for 3)6391. r. 3)6331. and l. 17. for ZXX. r. Z+X.

### Errors in the Table of Logarithms.

Num.	for	Correct	Num.	Diff.	Correct
1175	170	070	1000	344	434
3185	403	503	4749	94.4	91.4
9934	967	997	7961	44.5	54.5
			9076	74.8	47.8

After the Tables, Page 5. Line 16. for 5.7342957 Read 5.7342997.

Figure 10: Mathematical Tables, closeup of Preface Pages page 5



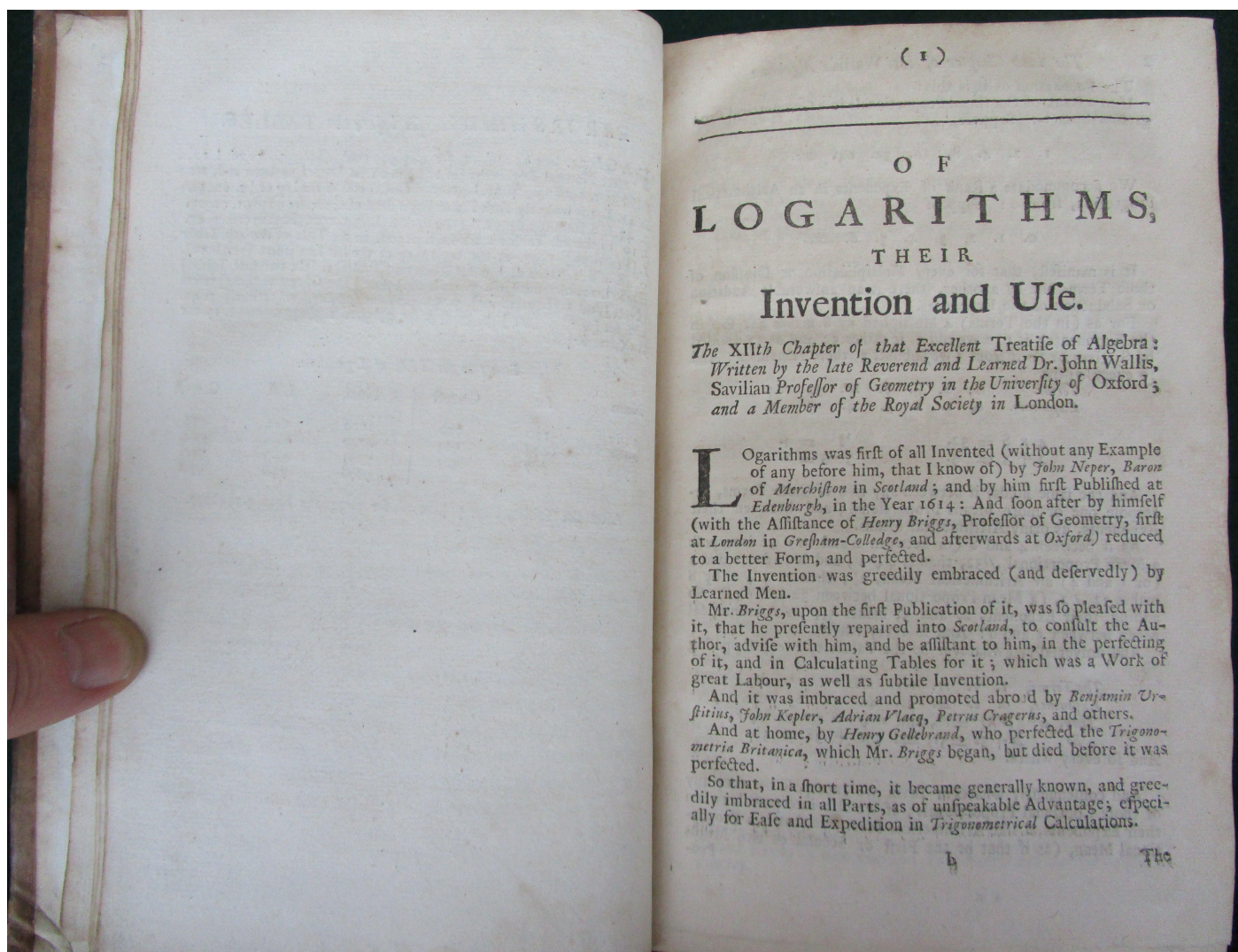


Figure 11: Mathematical Tables, Page 1