

**EUCLID, BOOK V.: PROVED  
ALGEBRAICALLY SO FAR AS IT  
RELATES TO COMMENSURABLE  
MAGNITUDES**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649018871

Euclid, Book V.: Proved Algebraically So Far as it Relates to Commensurable Magnitudes by  
Charles L. Dodgson

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Cover @ 2017

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**CHARLES L. DODGSON**

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**EUCLID, BOOK V,  
PROVED ALGEBRAICALLY.**

Euclides.

# EUCLID, BOOK V.

PROVED ALGEBRAICALLY

SO FAR AS IT RELATES TO

*COMMENSURABLE MAGNITUDES.*

TO WHICH IS PREFIXED

A SUMMARY

OF ALL THE NECESSARY ALGEBRAICAL OPERATIONS,

ARRANGED IN ORDER OF DIFFICULTY.

BY  
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OXFORD:

JAMES PARKER AND CO.,

1874.

OXFORD:

H. PICKARD HALL AND J. E. STACY,

PRINTERS TO THE UNIVERSITY.

18 FEB 25 1917

## P R E F A C E.

THE student is recommended to go through this treatise in the following order:—

First, to master the 'Preliminary Algebra,' and not to go further until he finds that, when covering up the right-hand column and setting himself any question in the left-hand column, he can at once *work out* (not merely supply from memory) the required answer.

Secondly, taking the Algebraical Enunciation which stands at the top of the right-hand column in each Proposition, to learn to supply the proof which follows it. To do this, he should cover the rest of the right-hand column, and try to work out the proof for himself, with the help of the directions in the left-hand column. As every step of the work has been already done in the 'Preliminary Algebra,' this ought to be possible without any reference to the right-hand column: but if any difficulty *should* occur, there will usually be found a marginal reference to the 'Preliminary Algebra,' and it will be better to turn back to the section referred to, and so refresh the memory, than to look at the right-hand column, which should only be uncovered, when the proof has been written out, as a test of the correctness of the work.

Thirdly, to practise himself in working out the same proofs, without the help of the directions in the left-hand column, from the Algebraical Enunciations only. These are given by themselves at p. 49.



Fourthly, taking the Enunciation printed in *small* type in each Proposition, and covering up all below it, to learn to express it algebraically, as given in the first sentence of the right-hand column.

Fifthly, taking the Enunciation printed in *large* type in each Proposition, and covering up all below it, to learn to repeat it with the addition of algebraical symbols for the magnitudes, as given in the small-type Enunciation.

Sixthly, to learn Euclid's Definitions and Axioms, given at p. 53.

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