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RIDERS IN GEOMETRY

By

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P R E F A C E

Riders in general fall into two groups—those whose solution can be deduced in a more or less straightforward manner from the facts given or implied in the statement of the question; and those which can only be solved by a person possessing some mathematical sense or intuition.

We do not propose to consider the second kind. For the student of Matriculation or School Certificate standard their appearances in examination papers, happily, are rare.

This book does not profess to be a kind of key, or set of solutions, to a series of important riders; its object is rather to teach the student to think in an orderly manner, to fix his ideas at once upon the essential points in each question, and to enable him to note at once the relevant facts and deductions from them. The average student, when given a rider to solve, immediately commences trying this and trying that without any definite purpose. For the person of distinct mathematical ability that method has its advantages; but the author has found from experience that for the large majority of boys, working in this way without any ordered method, time is merely wasted; the boy becomes confused, loses interest, gets the idea that riders are beyond his powers and gives up all hope.

The illustrations have, for the most part, been taken from the “stock” riders. Once these have been acquired and understood, progress is easy. A few hints on the “form” of solutions are given in the introduction. No effort has been made to reproduce complete solutions in their finished form; that is left to the student. The aim has been to suggest how things are deduced, to link up the thought-processes of the mind.

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PREFACE

Stress has been laid upon the fact that the enunciations of the various propositions in Geometry are really descriptions of the properties possessed by the figures under consideration.

Exercises have been added at the end of each section; each exercise will be found to deal primarily with the ideas suggested in the section. They have been selected with a view to giving the reader an opportunity of using his own powers of deduction on the lines laid down in the book. The Senate of the University of London have kindly granted permission for the use of questions set at their Matriculation Examination.

The order followed in reading the book may be varied at will. The chapter on Loci has been placed at the end because it serves, in that position, as a general revision of the whole book.

The author has again gratefully to acknowledge his indebtedness to Mr G. L. Parsons, M.A., of Merchant Taylors' School, who has read both the MS. and the proof-sheets and made many valuable suggestions.

T. H. W. H.

September 1929

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