

SOLID GEOMETRY
AND
CONIC SECTIONS.

“Ὡς οὖν τ’ ἀρα, ἦν δ’ ἐγώ, μάλιστα προστακτέον, ὅπως οἱ ἐν τῇ καλλι-
πόλει σοι μηδενὶ τρόπῳ γεωμετρίας ἀφέξονται· πρὸς γὰρ πάσας μαθήσεις,
ὥστε καλλίον ἀποδέχεσθαι, ἴσμεν πού ὅτι τῷ ὅλῳ καὶ παντὶ διοίσει ἡμμένους
τε γεωμετρίας καὶ μή. τῷ παντὶ μέντοι νῆ Δί’, ἔφη.”

PLATO, *Repub.* Bk. VII. 527.

This was Divine Plato his Judgement, both of the purposed, chief,
and perfect use of Geometric; and of his second, depending and deri-
vative commodities. And for us, Christen men, a thousand thousand
mo occasions are to haue neede of the helpe of Hegethologicall Con-
templations; wherby to trapne our Imaginations and Fancies, by
litle and litle, to forsake and abandon the grosse and corruptible
Objectes of our outward senses: and to apprehend, by sure Doctrine
demonstrative, Things Mathematicall.

John Dee his Mathematicall Preface to Euclides Elementes.

A. D. 1570.

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AND

CONIC SECTIONS,

WITH APPENDICES ON TRANSVERSALS,
AND HARMONIC DIVISION,

FOR THE USE OF SCHOOLS.

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PREFACE.

THIS work is an endeavour to introduce into schools some portions of Solid Geometry which are now very little read in England. The first twenty-one Propositions of Euclid's Eleventh Book are usually all the Solid Geometry that a boy reads till he meets with the subject again in the course of his analytical studies. And this is a matter of regret, because this part of Geometry is specially valuable and attractive. In it the attention of the student is strongly called to the subject matter of the reasoning; the geometrical imagination is exercised; the methods employed in it are more ingenious than those in Plane Geometry, and have greater difficulties to meet; and the applications of it in practice are more varied.

I have added short appendices on Transversals, and on Harmonic Division, which will, I hope, be found useful.