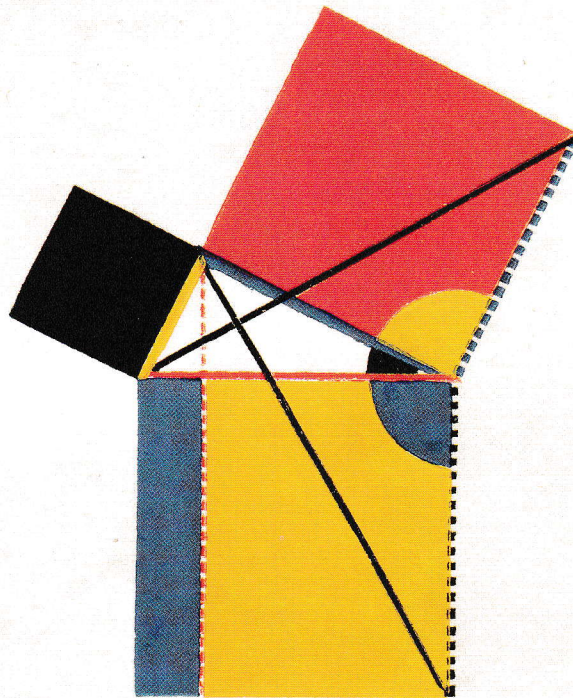# THE FIRST SIX BOOKS OF
THE ELEMENTS OF EUCLID

IN WHICH COLOURED DIAGRAMS AND SYMBOLS

ARE USED INSTEAD OF LETTERS FOR THE

GREATER EASE OF LEARNERS

BY OLIVER BYRNE

SURVEYOR OF HER MAJESTY'S SETTLEMENTS IN THE FALKLAND ISLANDS
AND AUTHOR OF NUMEROUS MATHEMATICAL WORKS

LONDON
WILLIAM PICKERING
1847

N a right angled triangle (![yellow triangle]), if a perpendicular (——) be drawn from the right angle to the oppofite fide, the triangles (![yellow triangle] , ![red triangle]) on each fide of it are fimilar to the whole triangle and to each other.

Becaufe ![shape] = ![shape] (B. 1. ax. 11), and ![black shape] common to ![triangle] and ![triangle] ;

![shape] = ![shape] (B. 1. pr. 32);

∴ ![triangle] and ![triangle] are equiangular; and confequently have their fides about the equal angles proportional (B. 6. pr. 4), and are therefore fimilar (B. 6. def. 1).

In like manner it may be proved that ![red triangle] is fimilar to ![triangle] ; but ![yellow triangle] has been fhewn to be fimilar to ![triangle] ; ∴ ![triangle] and ![red triangle] are fimilar to the whole and to each other.

Q. E. D.