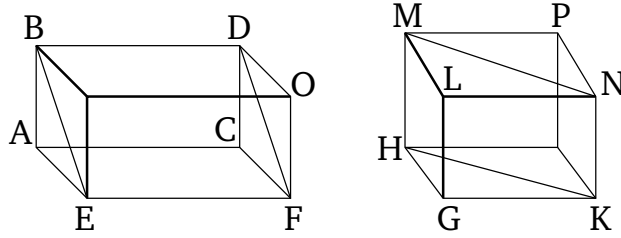# Book 11
Proposition 39

If there are two equal height prisms, and one has a parallelogram, and the other a triangle, (as a) base, and the parallelogram is double the triangle, then the prisms will be equal.

Let $ABCDEF$ and $GHKLMN$ be two equal height prisms, and let the former have the parallelogram AF, and the latter the triangle GHK, as a base. And let parallelogram AF be twice triangle GHK. I say that prism $ABCDEF$ is equal to prism $GHKLMN$.

For let the solids AO and GP have been completed. Since parallelogram AF is double triangle GHK, and parallelogram HK is also double triangle GHK [Prop. 1.34], parallelogram AF is thus equal to parallelogram HK. And parallelepiped solids which are on equal bases, and (have) the same height, are equal to one another [Prop. 11.31]. Thus, solid AO is equal to solid GP. And prism $ABCDEF$ is half of solid AO, and prism $GHKLMN$ half of solid GP [Prop. 11.28]. Prism $ABCDEF$ is thus equal to prism $GHKLMN$.

Thus, if there are two equal height prisms, and one has a parallelogram, and the other a triangle, (as a) base, and the parallelogram is double the triangle, then the prisms

are equal. (Which is) the very thing it was required to show.