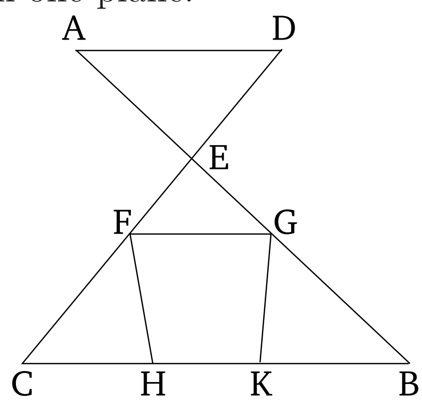
Book 11
Proposition 2

If two straight-lines cut one another then they are in one plane, and every triangle (formed using segments of both lines) is in one plane.



For let the two straight-lines AB and CD have cut one another at point E. I say that AB and CD are in one plane, and that every triangle (formed using segments of both lines) is in one plane.

For let the random points F and G have been taken on EC and EB (respectively). And let CB and FG have been joined, and let FH and GK have been drawn across. I say, first of all, that triangle ECB is in one (reference) plane. For if part of triangle ECB, either FHC or GBK, is in the reference [plane], and the remainder in a different (plane) then a part of one the straight-lines EC and EB will also be in the reference plane, and (a part) in a different (plane). And if the part $FCBG$ of triangle ECB is in the reference plane, and the remainder in a different (plane) then parts of both of the straight-lines EC and EB will also be in the reference plane, and (parts) in a different (plane). The very thing was shown to be absurb [Prop. 11.1]. Thus, triangle ECB is in one plane. And in whichever (plane) triangle ECB is (found), in that (plane) EC and EB (will) each also (be found). And in whichever (plane) EC and EB (are) each (found), in that (plane) AB and CD (will) also (be found) [Prop. 11.1]. Thus, the straight-lines AB and CD are in one plane, and every triangle (formed using segments of both lines) is in one plane. (Which is) the very thing it was required to show.