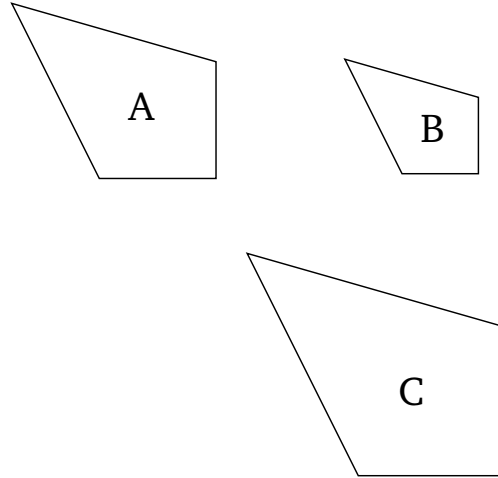


Book 6

Proposition 21

(Rectilinear figures) similar to the same rectilinear figure are also similar to one another.



Let each of the rectilinear figures A and B be similar to (the rectilinear figure) C . I say that A is also similar to B .

For since A is similar to C , (A) is equiangular to (C), and has the sides about the equal angles proportional [Def. 6.1]. Again, since B is similar to C , (B) is equiangular to (C), and has the sides about the equal angles proportional [Def. 6.1]. Thus, A and B are each equiangular to C , and have the sides about the equal angles proportional [hence, A is also equiangular to B , and has the sides about the equal angles proportional]. Thus, A is similar to B [Def. 6.1]. (Which is) the very thing it was required to show.