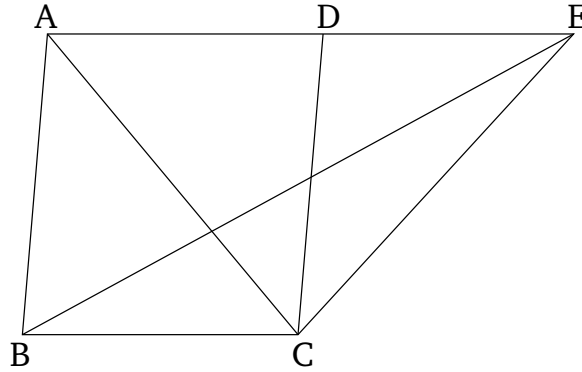# Book 1
Proposition 41

If a parallelogram has the same base as a triangle, and is between the same parallels, then the parallelogram is double (the area) of the triangle.

For let parallelogram $ABCD$ have the same base BC as triangle EBC, and let it be between the same parallels, BC and AE. I say that parallelogram $ABCD$ is double (the area) of triangle BEC.

For let AC have been joined. So triangle ABC is equal to triangle EBC. For it is on the same base, BC, as (EBC), and between the same parallels, BC and AE [Prop. 1.37]. But, parallelogram $ABCD$ is double (the area) of triangle ABC. For the diagonal AC cuts the former in half [Prop. 1.34]. So parallelogram $ABCD$ is also double (the area) of triangle EBC.

Thus, if a parallelogram has the same base as a triangle, and is between the same parallels, then the parallelogram is double (the area) of the triangle. (Which is) the very thing it was required to show.