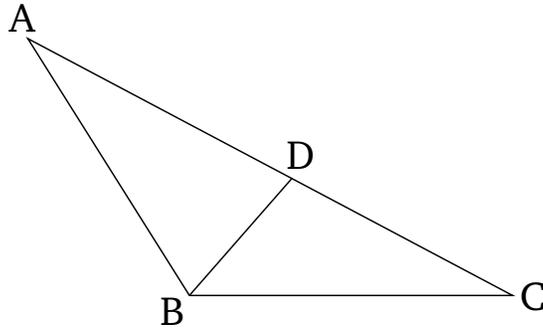


Book 1

Proposition 18

In any triangle, the greater side subtends the greater angle.



For let ABC be a triangle having side AC greater than AB . I say that angle ABC is also greater than BCA .

For since AC is greater than AB , let AD be made equal to AB [Prop. 1.3], and let BD have been joined.

And since angle ADB is external to triangle BCD , it is greater than the internal and opposite (angle) DCB [Prop. 1.16]. But ADB (is) equal to ABD , since side AB is also equal to side AD [Prop. 1.5]. Thus, ABD is also greater than ACB . Thus, ABC is much greater than ACB .

Thus, in any triangle, the greater side subtends the greater angle. (Which is) the very thing it was required to show.