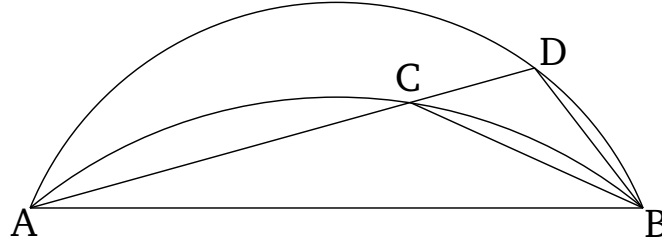


Book 3

Proposition 23

Two similar and unequal segments of circles cannot be constructed on the same side of the same straight-line.

For, if possible, let the two similar and unequal segments of circles, ACB and ADB , have been constructed on the same side of the same straight-line AB . And let ACD have been drawn through (the segments), and let CB and DB have been joined.



Therefore, since segment ACB is similar to segment ADB , and similar segments of circles are those accepting equal angles [Def. 3.11], angle ACB is thus equal to ADB , the external to the internal. The very thing is impossible [Prop. 1.16].

Thus, two similar and unequal segments of circles cannot be constructed on the same side of the same straight-line.