

Book 1

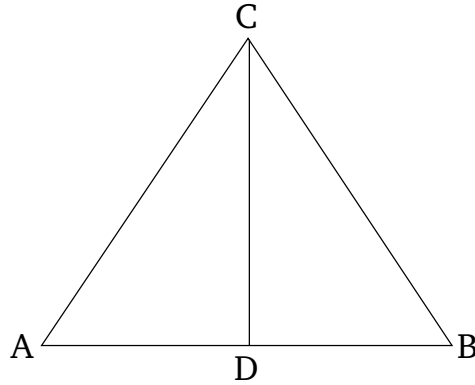
Proposition 10

To cut a given finite straight-line in half.

Let AB be the given finite straight-line. So it is required to cut the finite straight-line AB in half.

Let the equilateral triangle ABC have been constructed upon (AB) [Prop. 1.1], and let the angle ACB have been cut in half by the straight-line CD [Prop. 1.9]. I say that the straight-line AB has been cut in half at point D .

For since AC is equal to CB , and CD (is) common, the two (straight-lines) AC , CD are equal to the two (straight-lines) BC , CD , respectively. And the angle ACD is equal to the angle BCD . Thus, the base AD is equal to the base BD [Prop. 1.4].



Thus, the given finite straight-line AB has been cut in half at (point) D . (Which is) the very thing it was required to do.