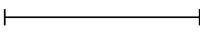


Book 7

Proposition 37

If a number is measured by some number then the (number) measured will have a part called the same as the measuring (number).

A 

B 

C 

D 

For let the number A be measured by some number B . I say that A has a part called the same as B .

For as many times as B measures A , so many units let there be in C . Since B measures A according to the units in C , and the unit D also measures C according to the units in it, the unit D thus measures the number C as many times as B (measures) A . Thus, alternately, the unit D measures the number B as many times as C (measures) A [Prop. 7.15]. Thus, which(ever) part the unit D is of the number B , C is also the same part of A . And the unit D is a part of the number B called the same as it (*i.e.*, a B th part). Thus, C is also a part of A called the same as B (*i.e.*, C is the B th part of A). Hence, A has a part C which is called the same as B (*i.e.*, A has a B th part). (Which is) the very thing it was required to show.