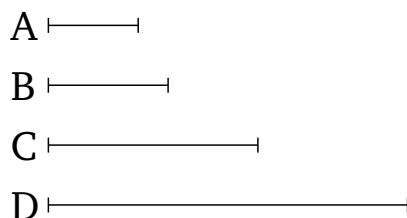


# Book 9

## Proposition 32

Each of the numbers (which is continually) doubled, (starting) from a dyad, is an even-times-even (number) only.



For let any multitude of numbers whatsoever,  $B$ ,  $C$ ,  $D$ , have been (continually) doubled, (starting) from the dyad  $A$ . I say that  $B$ ,  $C$ ,  $D$  are even-times-even (numbers) only.

In fact, (it is) clear that each [of  $B$ ,  $C$ ,  $D$ ] is an even-times-even (number). For it is doubled from a dyad [Def. 7.8]. I also say that (they are even-times-even numbers) only. For let a unit be laid down. Therefore, since any multitude of numbers whatsoever are continuously proportional, starting from a unit, and the (number)  $A$  after the unit is prime, the greatest of  $A$ ,  $B$ ,  $C$ ,  $D$ , (namely)  $D$ , will not be measured by any other (numbers) except  $A$ ,  $B$ ,  $C$  [Prop. 9.13]. And each of  $A$ ,  $B$ ,  $C$  is even. Thus,  $D$  is an even-time-even (number) only [Def. 7.8]. So, similarly, we can show that each of  $B$ ,  $C$  is [also] an even-time-even (number) only. (Which is) the very thing it was required to show.