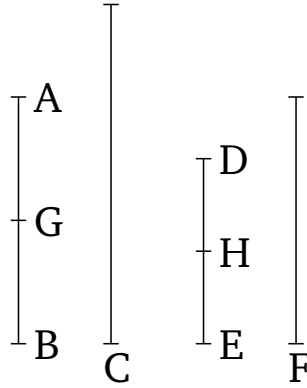# Book 7
Proposition 6

If a number is parts of a number, and another (number) is the same parts of another, then the sum (of the leading numbers) will also be the same parts of the sum (of the following numbers) that one (number) is of another.

For let a number AB be parts of a number C, and another (number) DE (be) the same parts of another (number) F that AB (is) of C. I say that the sum AB, DE is also the same parts of the sum C, F that AB (is) of C.

For since which(ever) parts AB is of C, DE (is) also the same parts of F, thus as many parts of C as are in AB, so many parts of F are also in DE. Let AB have been divided into the parts of C, AG and GB, and DE into the parts of F, DH and HE. So the multitude of (divisions) AG, GB will be equal to the multitude of (divisions) DH, HE. And since which(ever) part AG is of C, DH is also the same part of F, thus which(ever) part AG is of C, the sum AG, DH is also the same part of the sum C, F [Prop. 7.5]. And so, for the same (reasons), which(ever) part GB is of C, the sum GB, HE is also the same part of the sum C, F. Thus, which(ever)

parts AB is of C, the sum AB, DE is also the same parts of the sum C, F. (Which is) the very thing it was required to show.