Proposition X.1

Given: two magnitudes $AB$ and $C$ s.t. $AB > C$
Claim: if we subtract from $AB$ a magnitude greater than half of $AB$ and repeat this, we will eventually be left with a magnitude smaller than $C$

Proof:
1. Draw a magnitude $DE$ that is a multiple of $C$ s.t. $DE > AB$ [V. Definition 4]
2. Divide $DE$ into sections $DF = FG = GE = C$
3. From $AB$, cut off $BH \geq \frac{1}{2} AB$ and again $KH$ s.t. $KH \geq \frac{1}{2} AH$
4. Repeat (3) the same number of times as in step 2
5. Since $DE > AB$, but since $GE < \frac{1}{2} DE$ and $HB \geq \frac{1}{2} AB$, we can conclude
that $AH < DG$

6. Since $DG > AH$, but $GF = C$ and $KH \geq \frac{1}{2}AH$, then $DF > AK$

7. Since $C = DF$, then $AK < C$

Q.E.F.

Flaw: Needs to specify that we are looking at 2 magnitudes that have a ratio