

MT 453 Elements

Speaker: Dan Moresco

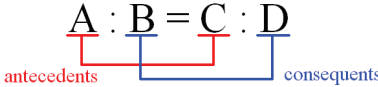
Scribe: Jill Cronin

March 23, 2009

Definition V.11

The term *corresponding magnitudes* is used of *antecedents* in relation to antecedents and *consequents* in relation to consequents.

For example, if $A : B = C : D$, then A and C are the antecedents and are corresponding magnitudes, and B and D are the consequents and are also corresponding magnitudes.



Definition V.12

An *alternate ratio* means taking the antecedent in relation to the antecedent and the consequent in relation to the consequent.

For example, if $A : B = C : D$, then the alternate ratios are $A : C$ and $B : D$.

In Proposition V.16, we will see that these alternate ratios are equal, so

$$A : C = B : D.$$

Definition V.13

An *inverse ratio* means taking the consequent as antecedent in relation to the antecedent as consequent.

For example, if we have ratios $A : B$ and $C : D$, the inverse ratios are $B : A$ and $D : C$.

The porism to Proposition V.7 will tell us that if $A : B = C : D$ then $B : A = D : C$.