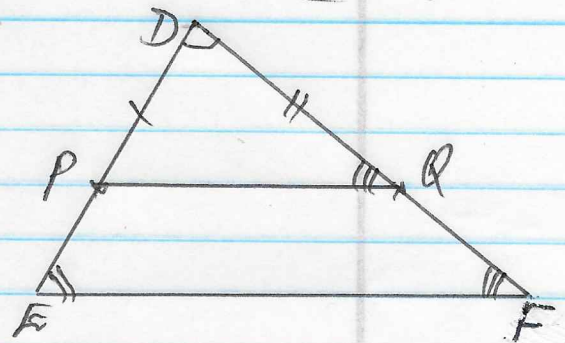
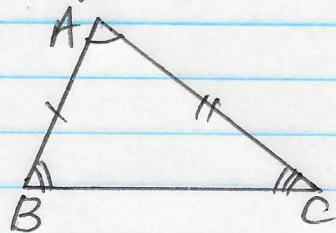


Angle-Angle Similarity Postulate (AA ~)



Given: $\angle A = \angle D$; $\angle B = \angle E$
 $\angle C = \angle F$

To prove: $\frac{AB}{DE} = \frac{AC}{DF} = \frac{BC}{EF}$

Const: $DP = AB$; $DQ = AC$ and join PQ

Proof: Now, $\triangle ABC \cong \triangle DPR$ by (SAS \cong)

$$\text{So } \frac{PE}{DP} = \frac{QF}{DQ}$$

$$\frac{PE}{DP} + 1 = \frac{QF}{DQ} + 1 \Rightarrow \frac{PE+DP}{DP} = \frac{QF+DQ}{DQ}$$

$$\text{i.e. } \frac{DE}{DP} = \frac{DF}{DQ} \Rightarrow \frac{DP}{DE} = \frac{DQ}{DF}$$

$$\text{But } DP = AB; DQ = AC \quad \rightarrow \quad \frac{AB}{DE} = \frac{AC}{DF}$$

Similarly: If 'P' on DE and Q on EF taken
 we may get $\frac{AB}{DE} = \frac{BC}{EF}$

$$\text{Thus } \frac{AB}{DE} = \frac{AC}{DF} = \frac{BC}{EF}$$

~~~~~