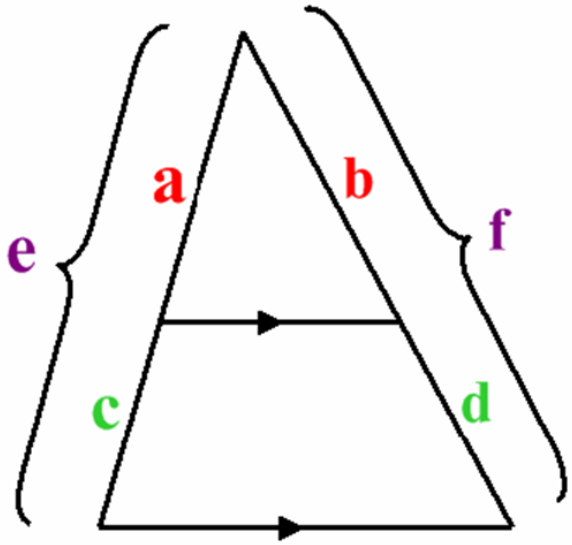
Th. 7.5 The Δ proportionality Th.

If a line is ∥ to 1 side of a Δ and intersects the other 2 sides in 2 distinct pts, then it separates those sides into segments of proportional length.

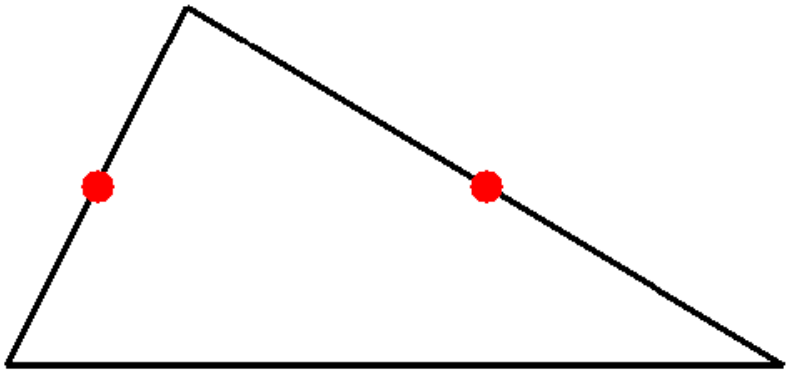

a
b
e
f
c
d

Th. 7.6

If a line intersects 2 sides of a Δ and separates the sides into corresponding segments of proportional lengths, then the line is $\|$ to the 3rd side.

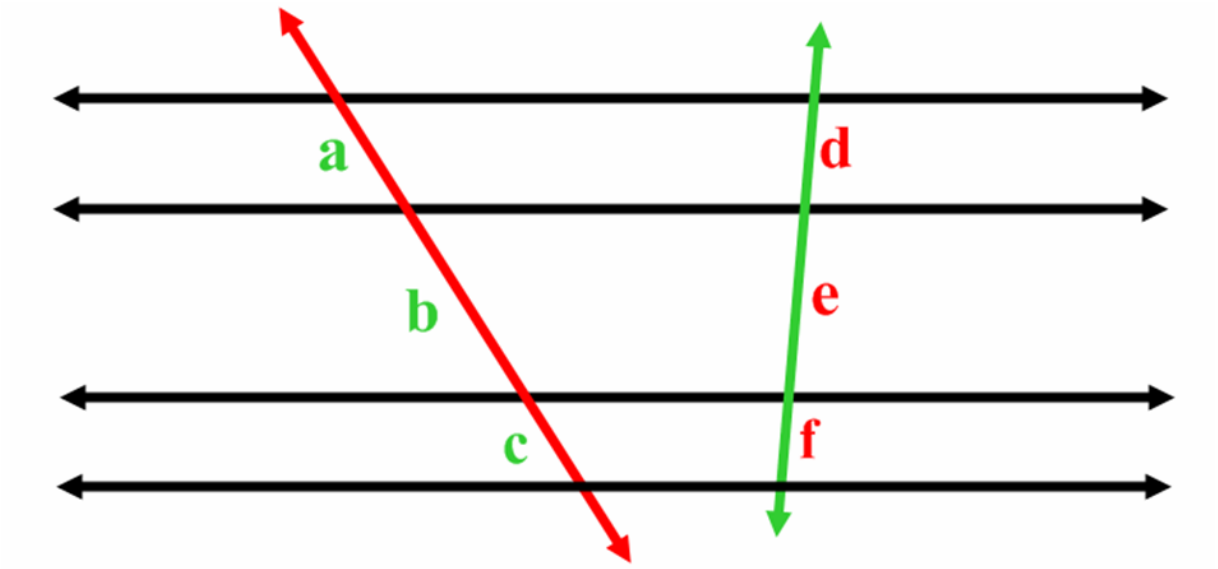
Th. 7.7 Δ Midsegment Th.

A segment whose endpts. are the midpts. of 2 sides of a Δ is || to the 3rd side and its length is one-half the length of the 3rd side.



Cor. 7-1

If 3 or more || lines intersect 2 transversals, they cut off the transversals proportionally.


a
d
b
e
c
f

Cor. 7-2

If 3 or more $\parallel$ lines cut off $\cong$ segments on 1 transversal then they cut off $\cong$ segments on every transversal.