

If two segments are **divided proportionally**, what do you think is true about each segment's component pieces?

They are in _____.

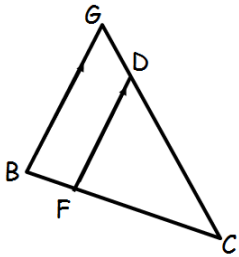
If AC and JL are _____, then _____ = _____

Example 1: Segments AC and GH are divided proportionally. Find AB.

Example 2: Are segments DF and MN divided proportionally?

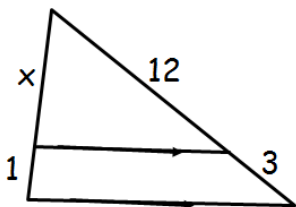
Triangle Proportionality Theorem:

If a line _____ to one side of a triangle intersects the other two sides, then it divides those sides _____.

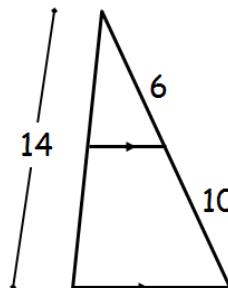


If $GB \parallel DF$, then _____ = _____

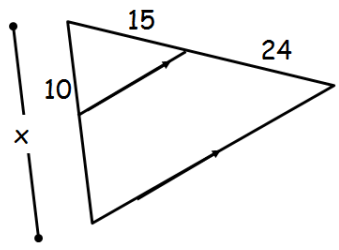
Example 3



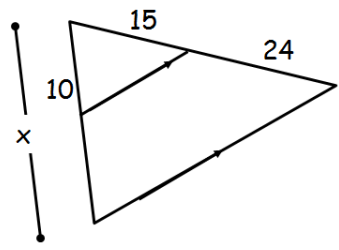
Example 4



Example 5

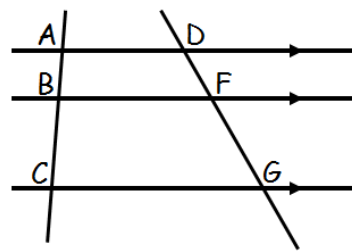


Example 5 - Again



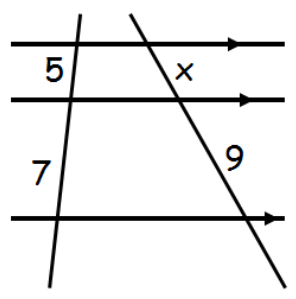
Corollary:

If three _____ lines intersect two transversals, then they divide the transversals _____.

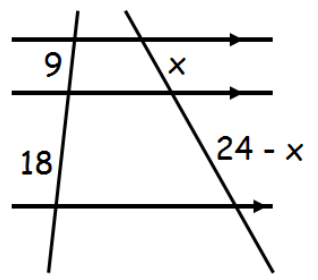


If $AD \parallel BF \parallel CG$, then _____ = _____

Example 6

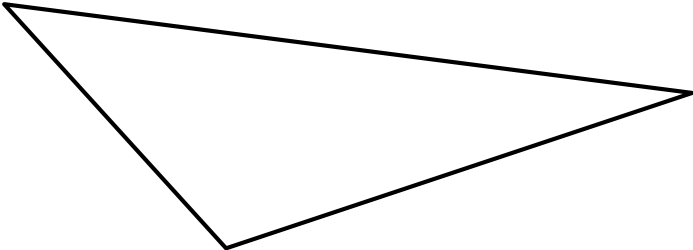


Example 7



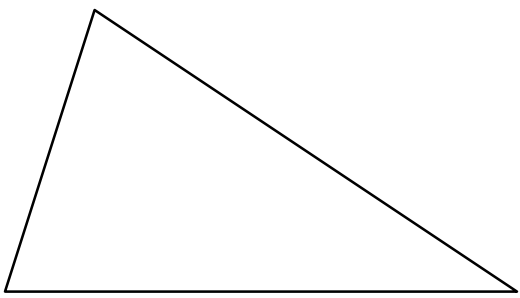
Triangle Angle Bisector Theorem:

If a ray _____ an angle of a triangle, then it divides the opposite _____ into segments _____ to the other two sides.



If DG bisects $\angle FDE$, then ____ = ____

Example 8



Example 9

