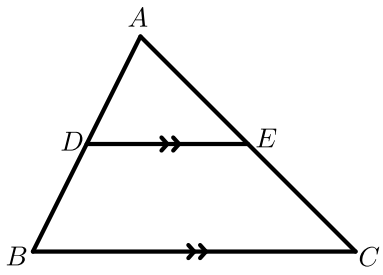
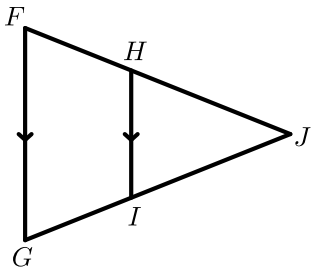
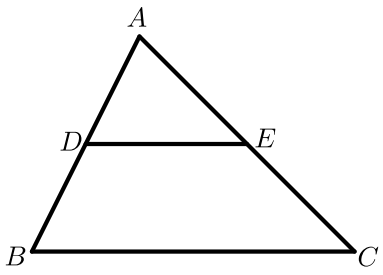
Triangle Proportionality Theorem

Examples & Non-Examples

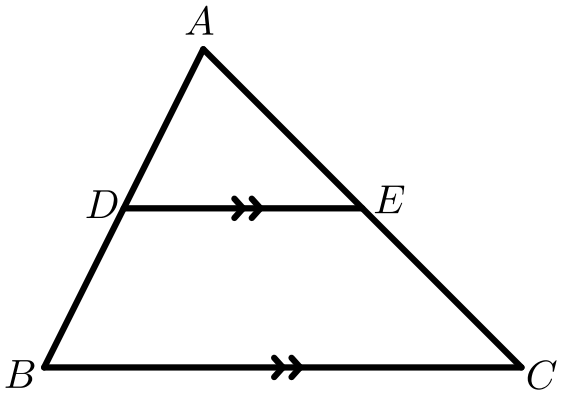
✔ Example	✔ Example	✖ Non-Example
		
If DE || BC, then $\frac{AD}{DB} = \frac{AE}{EC}$	If HI || FG, then $\frac{JH}{HF} = \frac{JI}{IG}$	If $\frac{AD}{DB} = \frac{AE}{EC}$, then DE || BC

Definition

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

In other words, the segments created on one side of the triangle have the same ratio as the corresponding segments on the other side.

Example



If $DE||BC$, then $\frac{AD}{DB} = \frac{AE}{EC}$.

Important

The theorem works because the parallel line creates corresponding similar triangles.