

LCHL Theorem Worksheet

Prove that, if two triangles $\triangle ABC$ and $\triangle A'B'C'$ are similar, then their sides are proportional, in order:

$$\frac{|AB|}{|A'B'|} = \frac{|BC|}{|B'C'|} = \frac{|CA|}{|C'A'|}.$$

Diagram:

Given:

To Prove:

Construction:

Proof:

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Prove that if three parallel lines cut off equal segments on some transversal line, then they will cut off equal segments on any other transversal line.

Diagram:

Given:

To prove:

Construction:

Proof:

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Let ABC be a triangle. If a line l is parallel to BC and cuts $[AB]$ in the ratio $s:t$, then it also cuts $[ac]$ in the same ratio.

Diagram:

Given:

To Prove:

Construction:

Proof: