

Triangles Proportionality & Similar Right Triangles

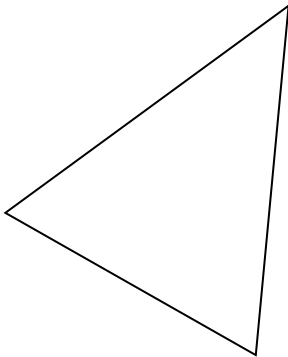
Parallel Line Similarity

A line parallel to one side of a _____ divides the other two sides _____.

The converse is also true.

Here's a picture:

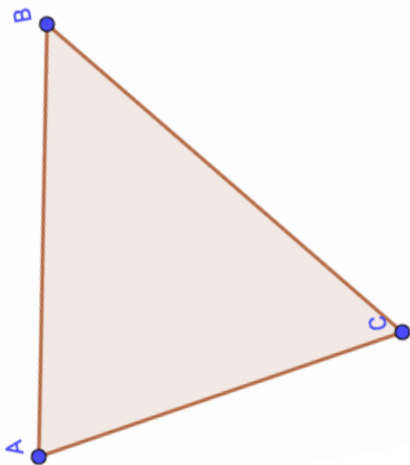
$$\frac{AD}{DB} = \frac{CE}{EB}$$



Angle Bisector Similarity

If one angle of a triangle is _____, then the angle bisector of the triangle divides the opposite side into two segments that are _____ to the other two sides of the triangle.

Like this:



$$\frac{AD}{DC} = \frac{BA}{BC}$$

Right Triangle Similarity

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An altitude of any right triangle splits the triangle into similar triangles. We end up with a small right triangle, a medium right triangle, and the original right triangle.

It may be easier to see the corresponding angles and sides if we pull the three triangles apart and draw them side by side.

