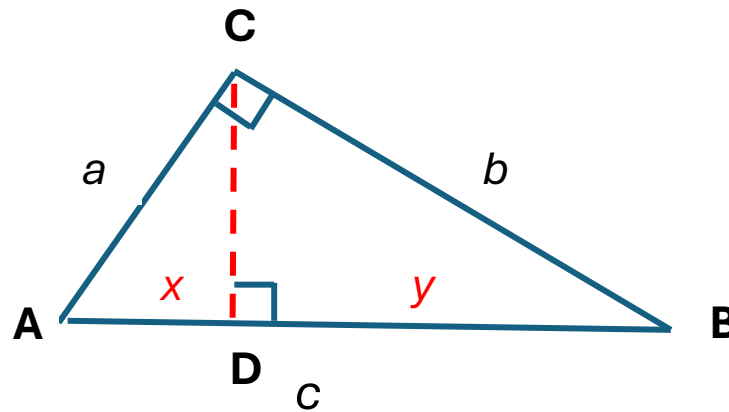# Right Triangle; Altitude ~ Similar Triangles

Theorem

If the altitude is drawn to the hypotenuse of a right triangle, the two triangles formed are similar to the given triangle and to each other.

Given: ΔACB, ∠ACB is rt ∠, $\overline{CD} \perp \overline{AB}$

Corollary – geometric mean

If the altitude is drawn to the hypotenuse of a right triangle, the length of the leg of the right triangle is the geometric mean between the length of the hypotenuse and the length of the segment of the hypotenuse adjacent to that leg.