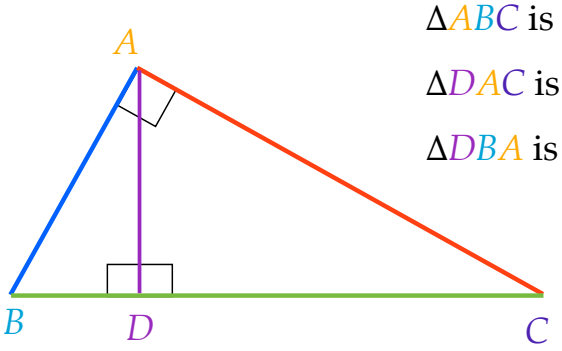
Similarity within a Right Triangle

Name _____

Date _____ Period _____

An altitude drawn from a vertex to a hypotenuse of a right triangle divides the triangle into two triangles that are similar to the original triangle and to each other.



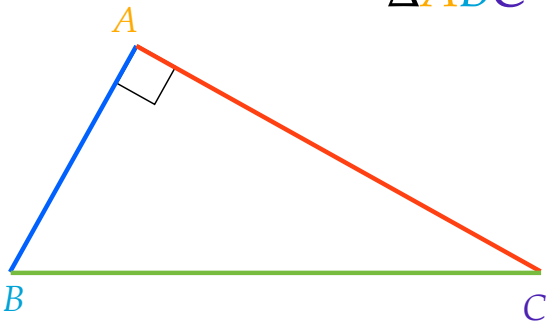
ΔABC is a right triangle

ΔDAC is a right triangle

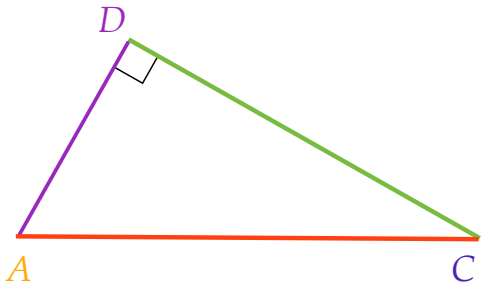
ΔDBA is a right triangle

An altitude drawn from a vertex to a hypotenuse of a right triangle divides the triangle into two triangles that are similar to the original triangle and to each other.

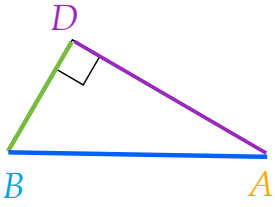
$$\Delta ABC \sim \Delta DAC \sim \Delta DBA$$



ΔABC is a right triangle

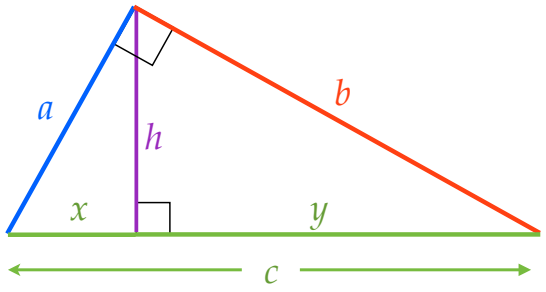


ΔDAC is a right triangle



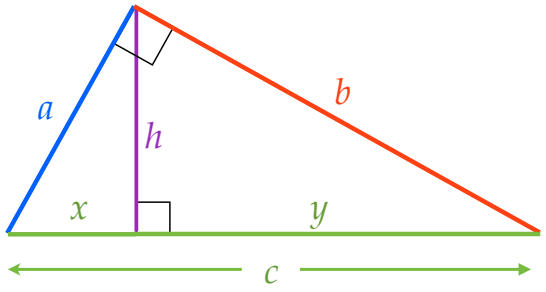
ΔDBA is a right triangle

Complete the following proportions of the three similar right triangles



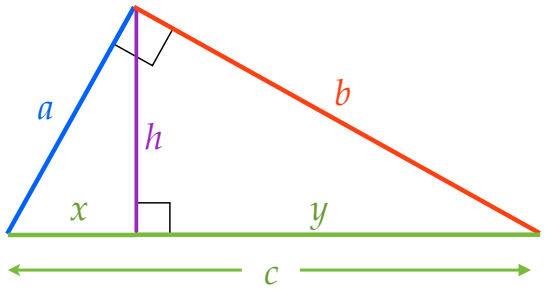
$$\frac{b}{c}$$

Complete the following proportions of the three similar right triangles



$$\frac{a}{b}$$

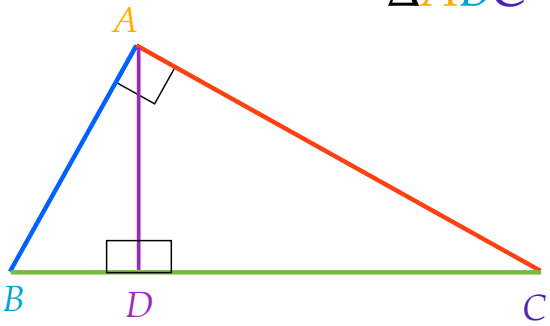
Complete the following proportions of the three similar right triangles



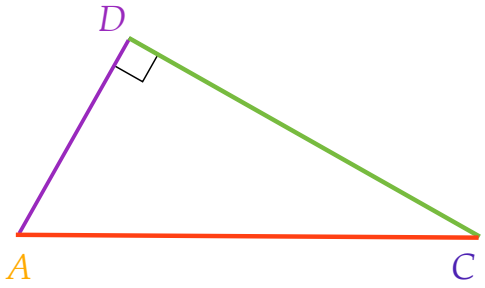
$$\frac{b}{h}$$

An altitude drawn from a vertex to a hypotenuse of a right triangle divides the triangle into two triangles that are similar to the original triangle and to each other.

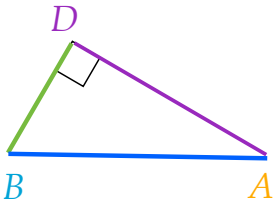
$$\Delta ABC \sim \Delta DAC \sim \Delta DBA$$



ΔABC is a right triangle



ΔDAC is a right triangle



ΔDBA is a right triangle