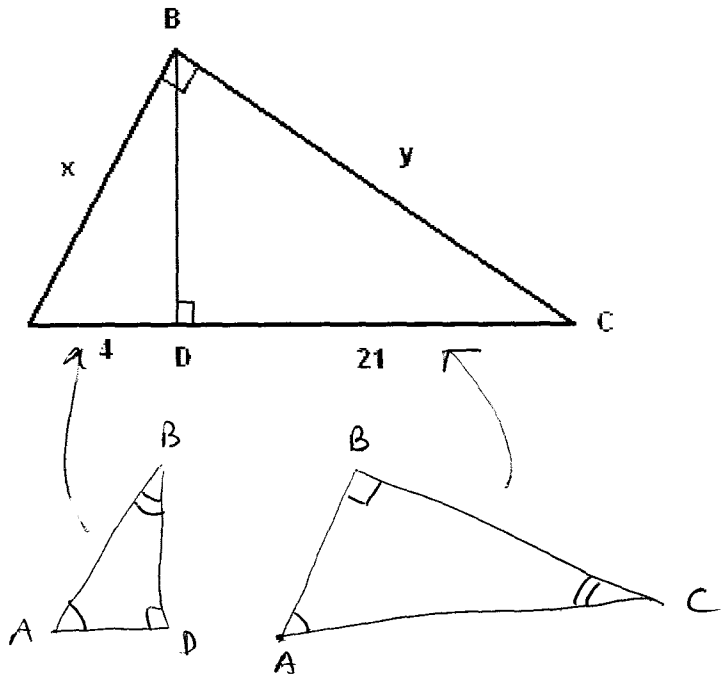


Geometry Worksheet: Right Triangle (2)

1. ABC is a right triangle and BD is perpendicular to AC. Find the lengths of BA and BC.

Triangles ABD and ABC are both right angle and have one acute angle equal in size: $\angle A$.
 Hence the two triangles are similar



$$\Rightarrow \frac{AC}{AB} = \frac{AB}{AD}$$

$$\Rightarrow \frac{25}{x} = \frac{x}{4} \quad \Rightarrow \quad x^2 = 4 \cdot 25 = 100$$

$$\underline{\underline{x = 10}} \quad (BA)$$

Pythagora: $x^2 + y^2 = 25^2$

$$10^2 + y^2 = 25^2$$

$$\Rightarrow y \approx \underline{\underline{23.0}} \quad (BC)$$