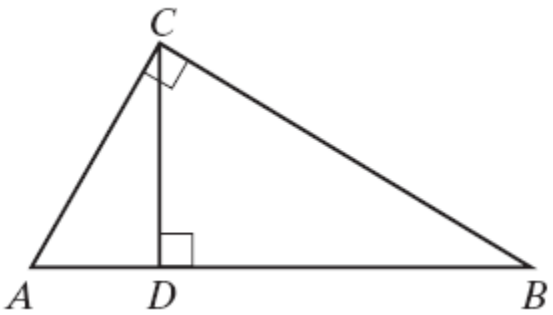
Name: _____

Similarity in Right Triangles

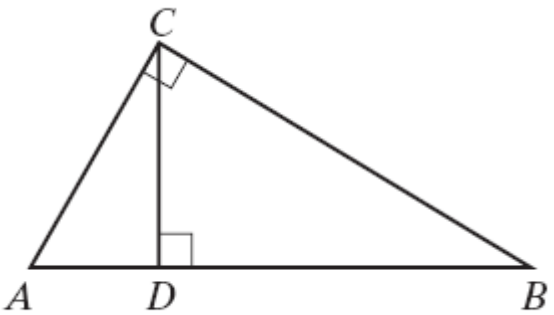
1) Given: $\triangle ABC$ with $\angle ACB$ a right angle and altitude $\overline{CD} \perp \overline{AB}$ at D.

Prove: $\triangle ABC \sim \triangle ACD \sim \triangle CBD$

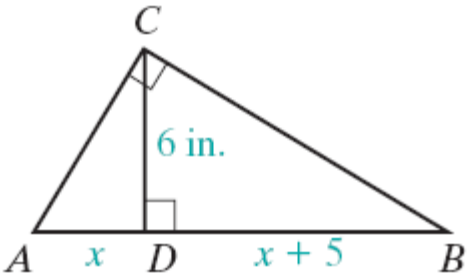


2) Given: $\triangle ABC$ with $\angle ACB$ a right angle and altitude $\overline{CD} \perp \overline{AB}$ at D

Prove: $\frac{AB}{AC} = \frac{AC}{AD}$ and $\frac{AB}{BC} = \frac{BC}{BD}$



3) The altitude to the hypotensue of right triangle ABC separates the hypotensue into two segments.The length of one segment is 5 inches more than the measure of the other.If the length of the altitude is 6 inches, find the length of the hypotensue.



4) $\triangle ABC$ is a right triangle with $\angle ACB$ the right angle.Altitude $\overline{CD}$ intersects $\overline{AB}$ at D. In each case find the required length.

1) If AD = 3 and CD = 6, find DB.

2) If AC = 10 and AD = 5, find AB.

3) If AD = 4 and DB = 9, find CD.

4) If AD = 3 and DB = 27, find CD.

5) If DB = 8 and AB = 18, find BC.

6) If AB = 8 and AC = 4, find AD

7) If AC = 6and AB = 9, find AD

8) If DB = 4 and BC = 10, find AB.

9) If AD = 2 and AB = 18, find AC

5) In parallelogram ABCD, $\overline{AE} \perp \overleftrightarrow{BC}$ and $\overline{AF} \perp \overleftrightarrow{CD}$. Prove that $\triangle ABE \cong \triangle ADF$.