

Lesson 3 Problem 2 Solution

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February 10, 2018

Problem 1

The triangle ABC and the triangle ADC are congruent to each other since $AD = AB, DC = BC, AC = AC$. So $\angle DAC = \angle BAC, \angle DCA = \angle BCA$. So CA bisects $\angle DAB$. $\triangle DAB$ is an isosceles triangle. We proved before that the angle bisector coincides with the altitude in an isosceles triangle. So $AC \perp DB$