

The Problem of the Month March 2023

In the triangle below, let $\angle BAC = \angle ADC = \frac{\pi}{2}$, $AB = a$, $AC = b$ and $AD = d$. Show that $\frac{1}{a^2} + \frac{1}{b^2} = \frac{1}{d^2}$ and find positive integer values for both a and b such that $d = 120$.

