Introductory mathematics for Kf & Kb, 2000.

Project 4 - geometry

Is there a three dimensional variant of Pythagoras' theorem?

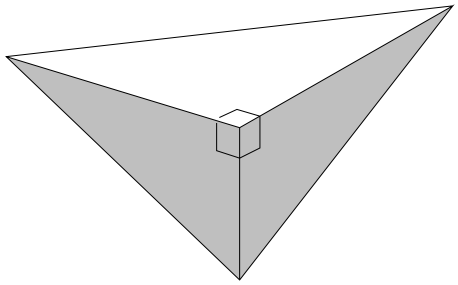

Figure 1:

Hints: First figure out what such a theorem could be. Once you have a possible 3D interpretation you have to check if it is a valid statement. In a first run you should then make as many simplifying assumptions a possible, for example that the three edges meeting at the right angled corner have the same length. If your conjecture then turns out to be false, you have not vasted to much effort. If, on the other hand, it proves to be true, you may proceed to check if your statement hold under more general conditions, for example, that two of the edges have the same length, and so on.