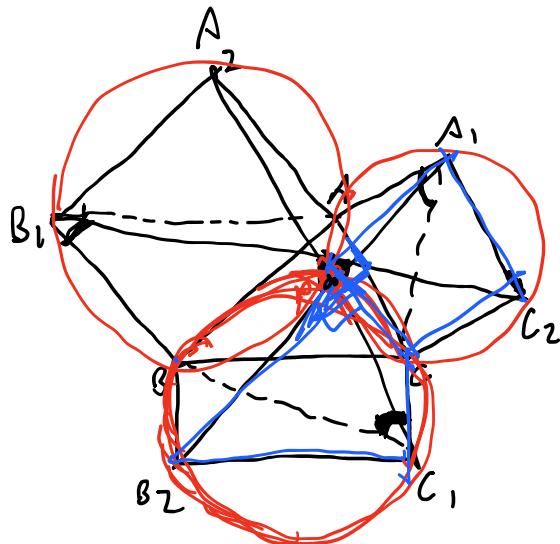


Rectangles BCC_1B_2 , CAA_1C_2 , and ABB_1A_2 are erected outside an acute triangle ABC . Suppose that

$$\angle BC_1C + \angle CA_1A + \angle AB_1B = 180^\circ.$$

Prove that lines B_1C_2 , C_1A_2 , and A_1B_2 are concurrent.



$\text{PE } A_1B_2$

$\text{PT } B_1C_2$

$\text{PT } C_1A_2$

$P = A_1B_2 \cap B_1C_2 \cap C_1A_2$