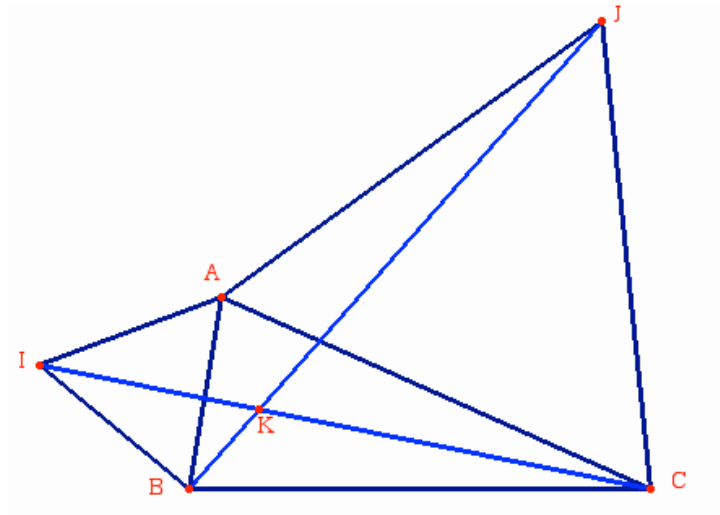


**Problem I :** On the sides of an ordinary triangle  $ABC$  we build the two equilateral triangles  $ABI$  and  $ACJ$ .

Draw the segments  $[IC]$  and  $[BJ]$ .

Prove carefully *in verbal English* that the two segments  $IC$  and  $BJ$  have the same length and that the measure of  $\angle CKJ$  is  $60^\circ$



**Problem II :** Inside the square ABCD build the equilateral triangles ABI and on the side BC build the equilateral triangle CBJ.  
Prove carefully *in verbal English* that the three points D,I,J are on the same line.

