Exercise 21 15min

I, J and K are the respective midpoints of segments [AB], [BC] and [CA] of triangle ABC.

1. Prove the parallelisms (UJ)//(AC), (JK)//(BA) and (KT)//(CB).
Justify the figure contains three parallelograms.

2. Justify that, under the translation that brings A onto I, the image of triangle AIK is triangle IBJ.

3 What is the image of triangle IBJ under the translation that brings B onto J?

4 Which translation brings triangle KJC onto triangle AIK?

Exercise 22 10min

Point O is the center of concentric circles (C) and (C').
[IJ] is a diameter of circle (C).
K is a point on circle (C').

1. Write a construction program for point L, the image of point J by the translation that brings K onto I. Complete the figure. What can be conjectured for point L?

2. Show that L belongs to circle (C').