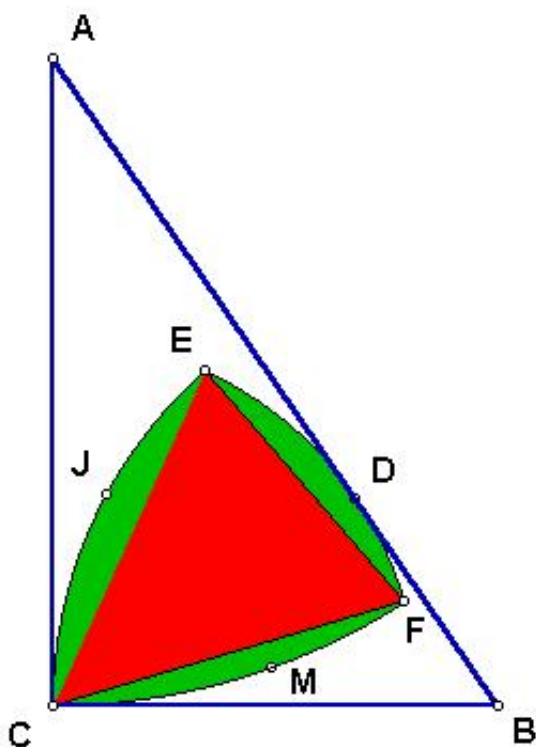# Two "triangles" in the right triangle

The problem

This problem is connected with *my post to geometry-puzzles newsgroup*,
and with my previous *problem No. 42.*
Solve the problem No. 42,
for the case when the triangle *ABC* has the *right* angle *ACB*, legs *a=BC*,
b=CA, and hypotenuse *c=AB*, see the Figure:

First, do next six easy construction steps:
1A. Draw the circle with center at *A*, and with radius *b=AC*;
1B. draw the circle with center at *B* , and with radius *a=BC* ;
1C. draw the circle with center at *C*, and with radius *CD*, height to
hypotenuse *AB*;
2A. find point *E* (inside the triangle *ABC*!) of intersection of circles in
1B and 1C;
2B. find point *F* (inside the triangle *ABC*!) of intersection of circles in
1A and 1C;
2C. the vertex *C* is point (inside the triangle *ABC*!) of intersection of
circles in 1A and 1B.