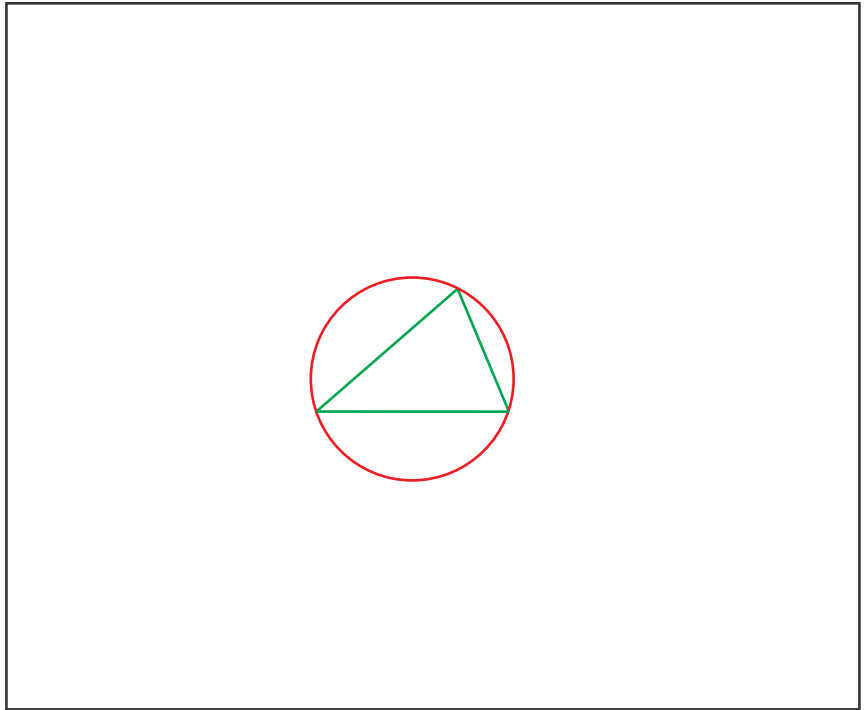
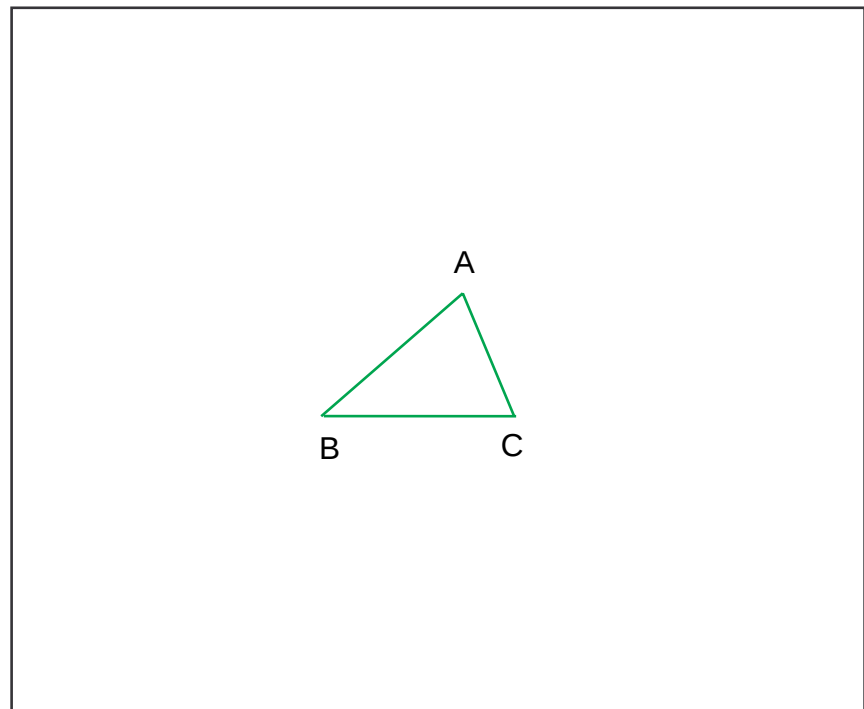

Construction 27: Book IV, Proposition 5

About a given triangle to circumscribe a circle.



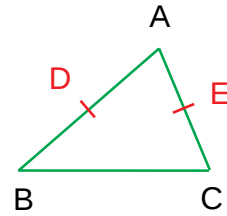
IV.5:2. Let ABC be the given triangle;



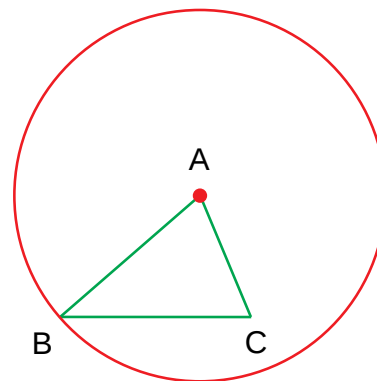
IV.5:5. Let the straight lines AB, AC be bisected at the points D, E [I.10],

GOSUB I.10 two times.
First: for AB. We follow C#5B.

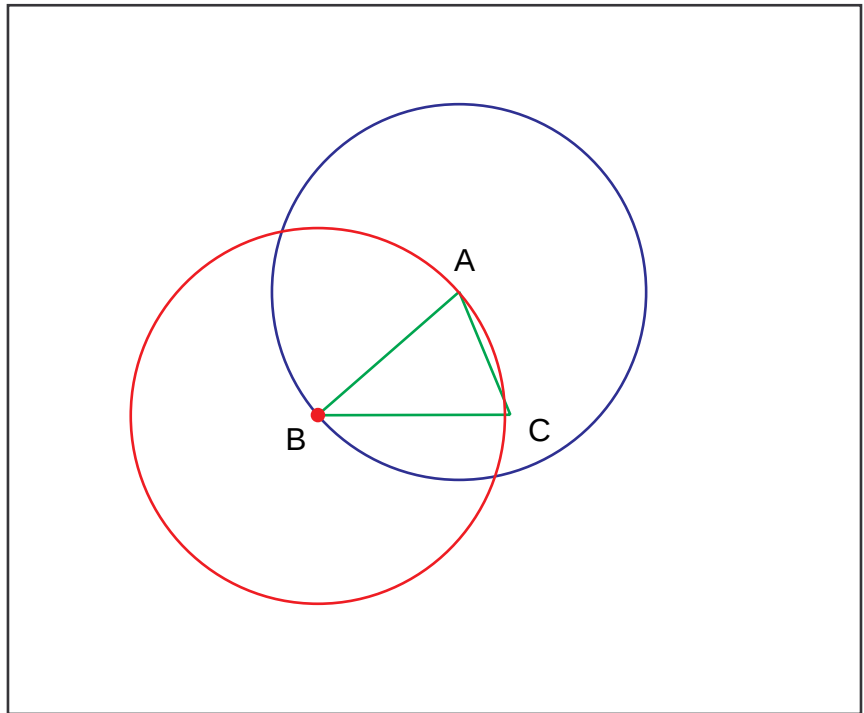
WANTED



Swing AB around A.



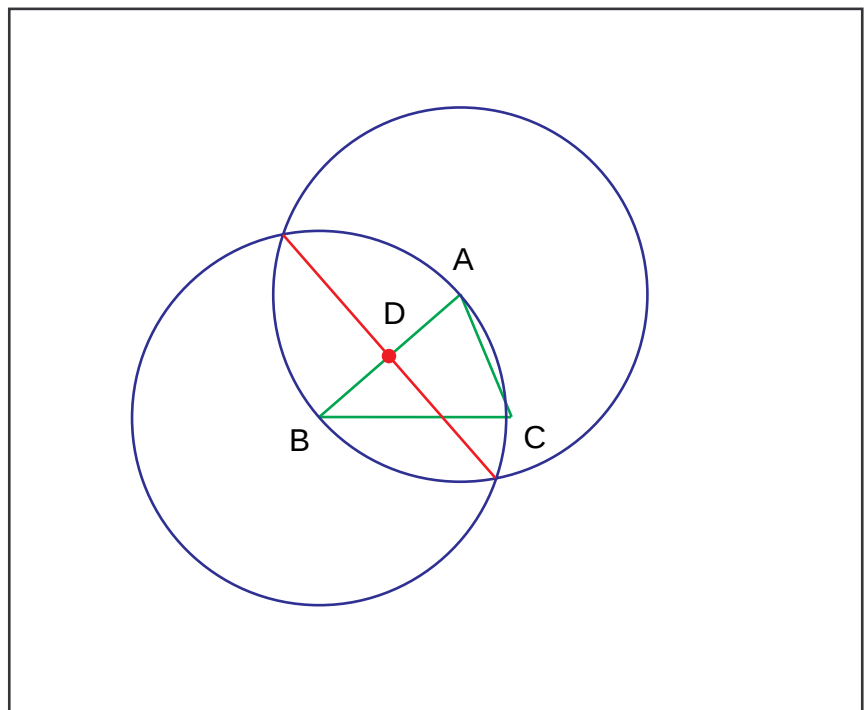
Swing BA around B.



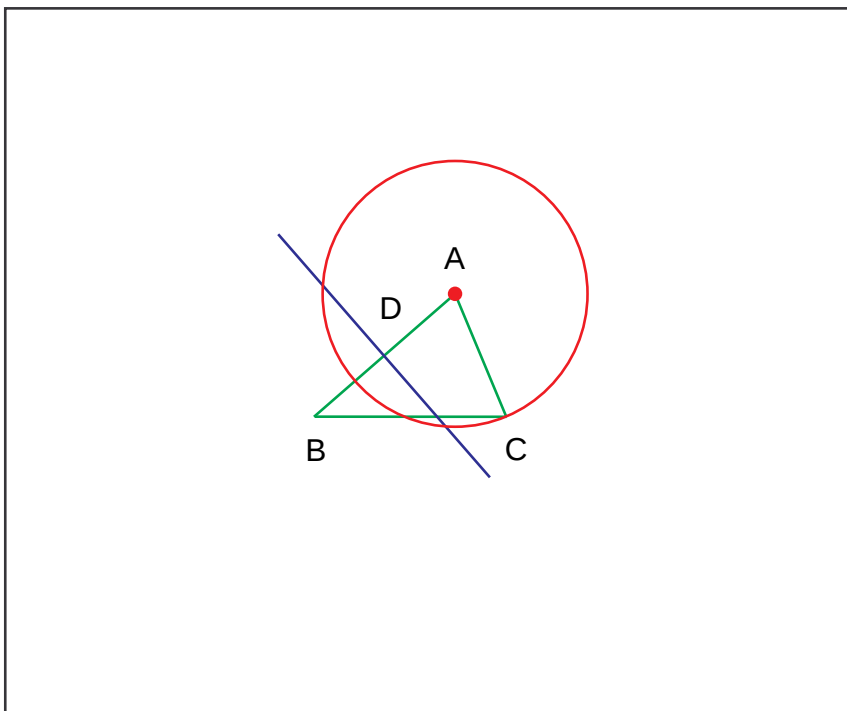
Connect the two crossing points to locate D on AB.

Cleanup. Save the construction line.

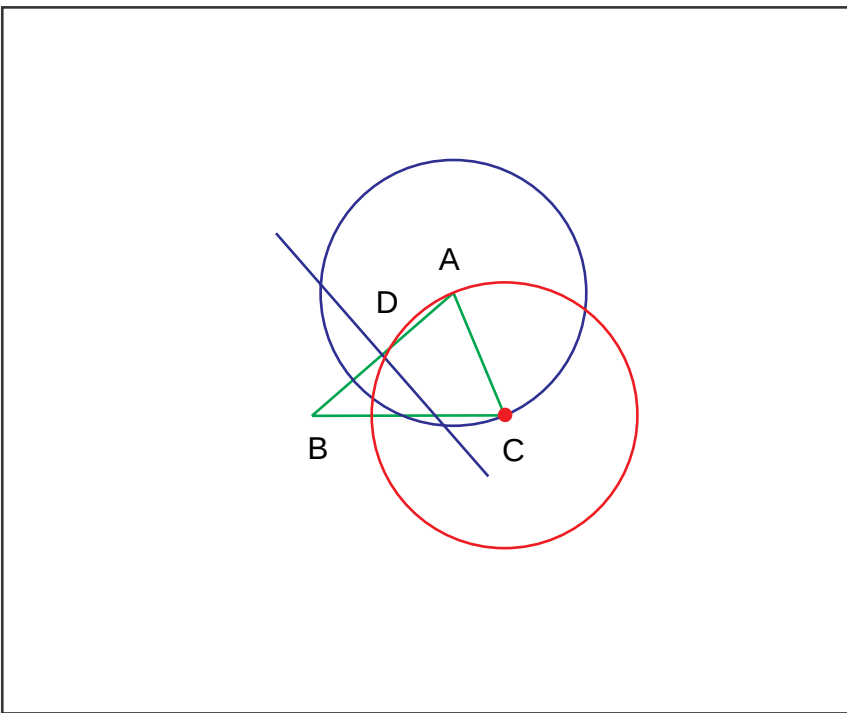
RETURN to IV.5 at line 5.
GOSUB I.10 (C#5B) for AC.



Swing AC around A.



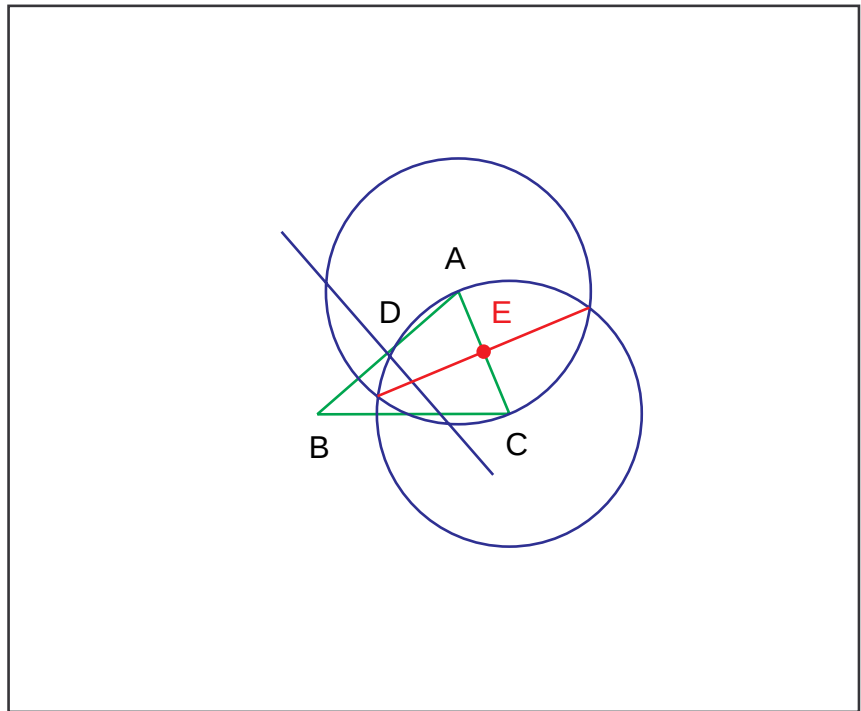
Swing CA around C.



Connect the two crossing points to locate E on AC.

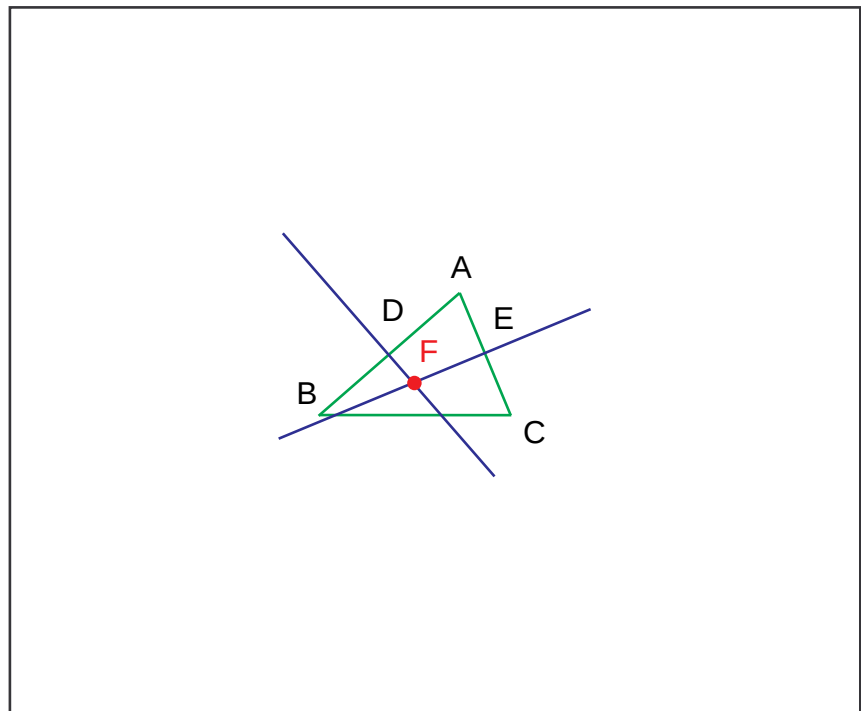
Cleanup. Save the construction line.

RETURN to IV.5 at line 5.



IV.5:6. and from the points D, E let DF, EF be drawn at right angles to AB, AC;

But these are the lines constructed in steps 3 and 6, so locate F at their crossing.



IV.5:20. Therefore the circle described with centre F and distance one of the straight lines FA , FB , FC will pass also through the remaining points, and the circle will have been circumscribed about the triangle ABC .

Let it be circumscribed, as ABC .

Q.E.F.

