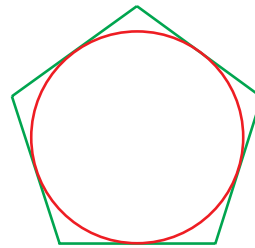
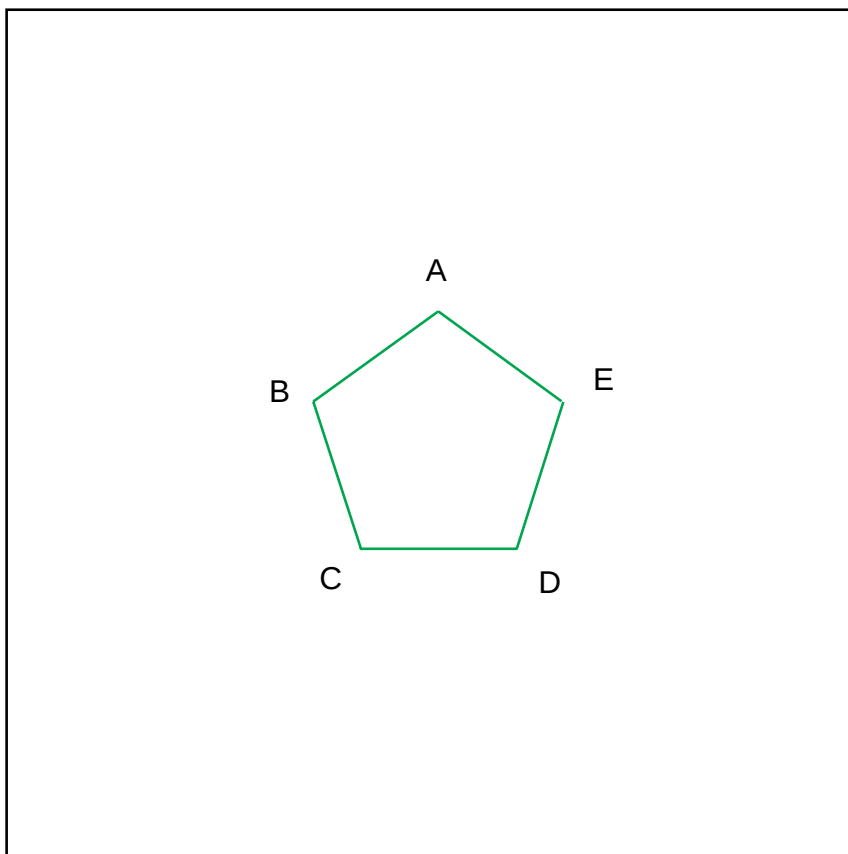

Construction 35: Book IV, Proposition 13

In a given pentagon, which is equilateral and equiangular, to inscribe a circle.

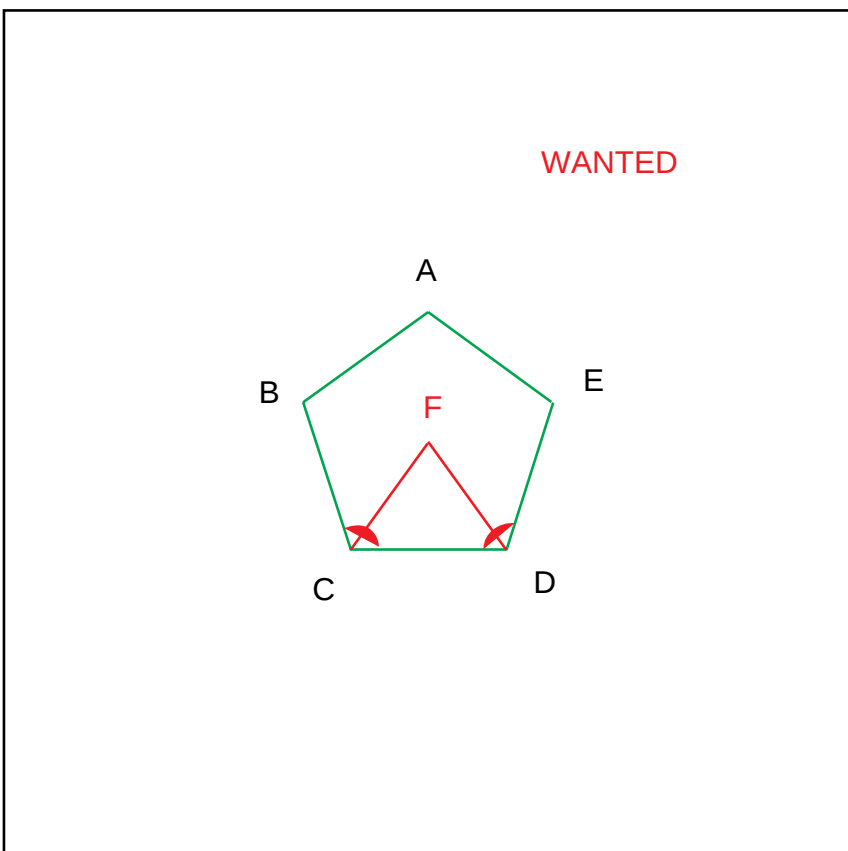


IV.13:4. Let ABCDE be the given equilateral and equiangular pentagon;

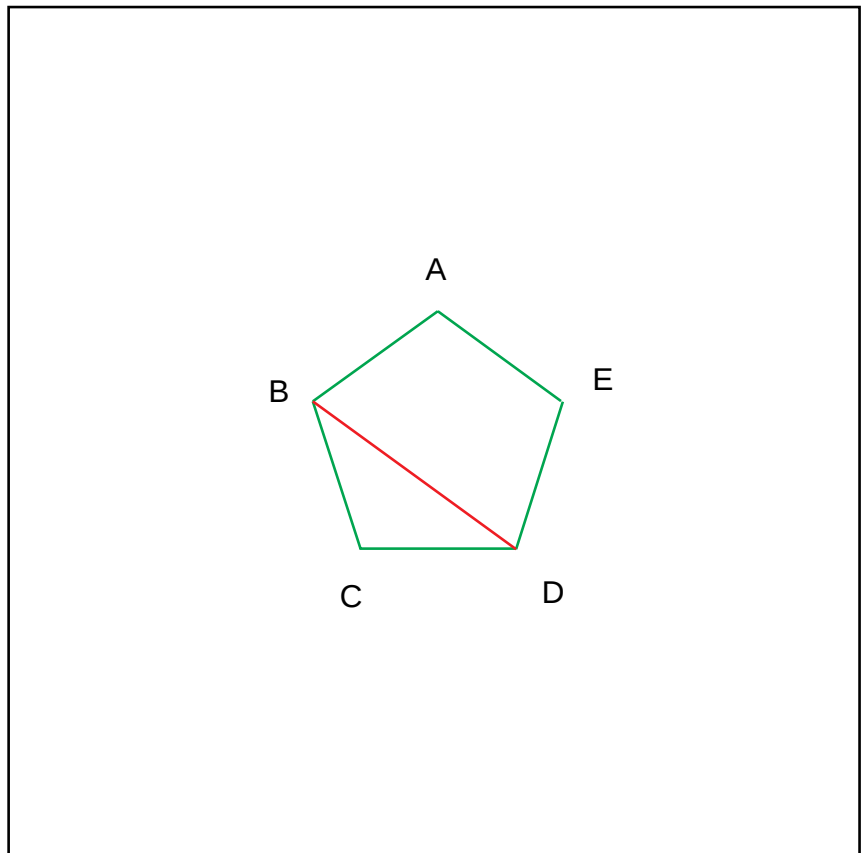


IV.13:7. For let the angles BCD, CDE be bisected by the lines CF, DF respectively;
 ([I.9], C#4)

GOSUB I.9 for BCD. Do not relabel.

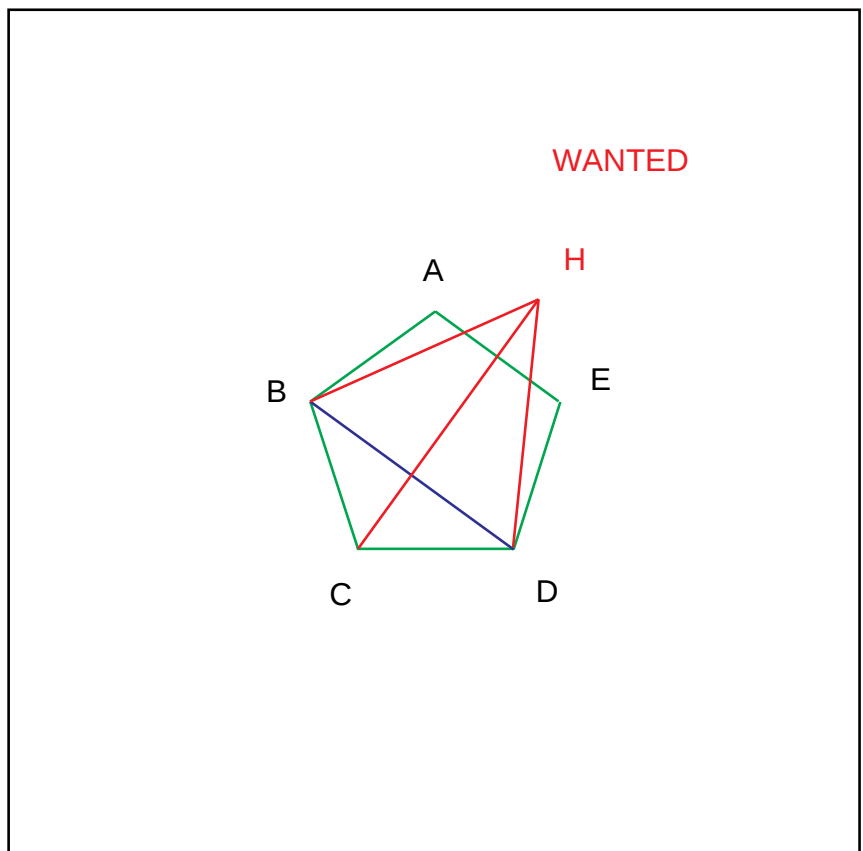


I.9:4. let BD be joined,

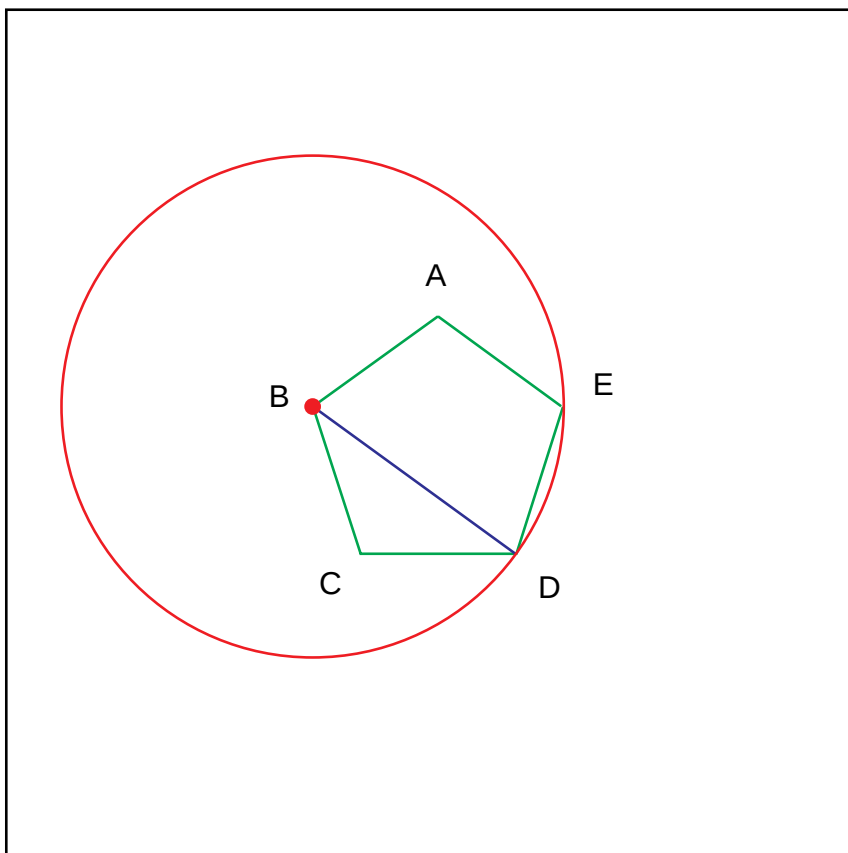


I.9:6. and on BD let the equilateral triangle BDH be constructed;
let CH be joined.

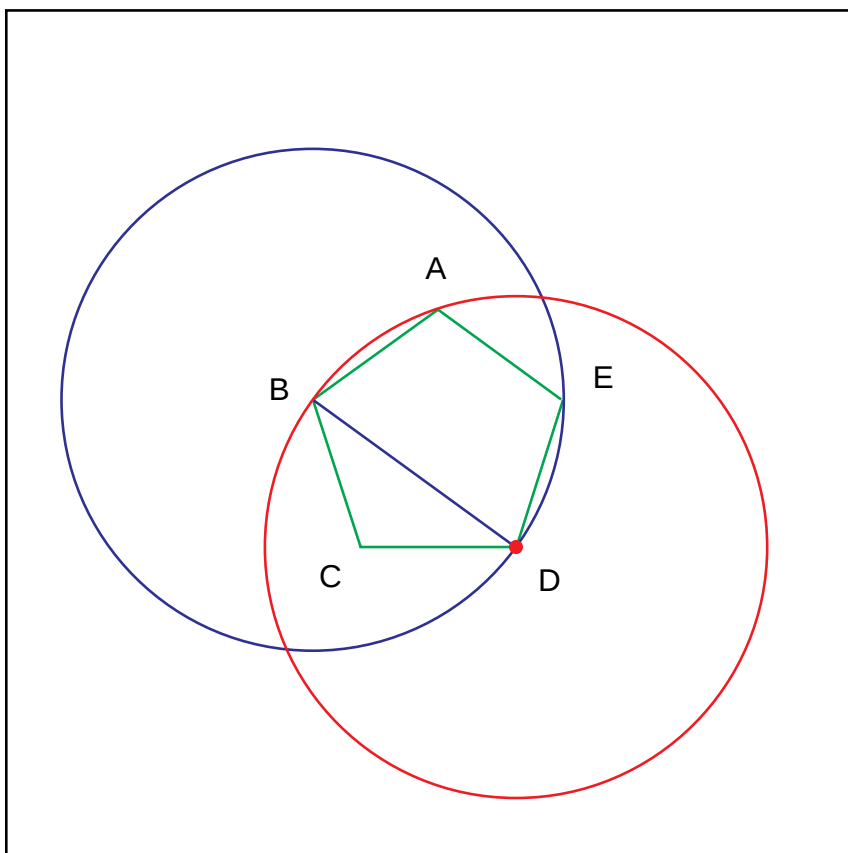
GOSUB I.1.



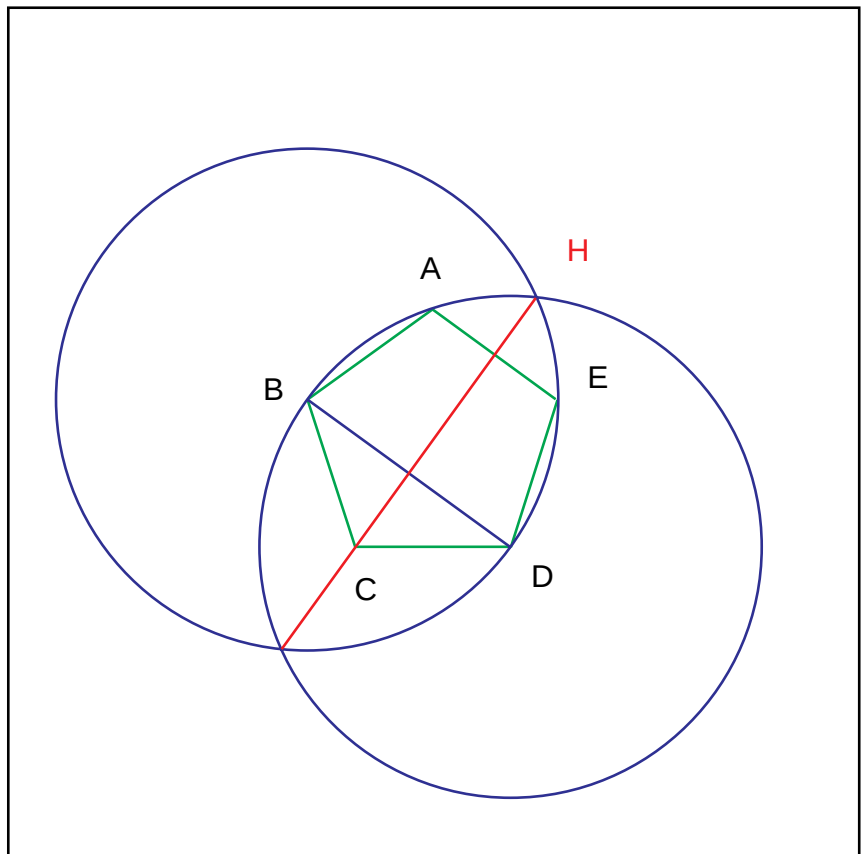
Swing BD around B.



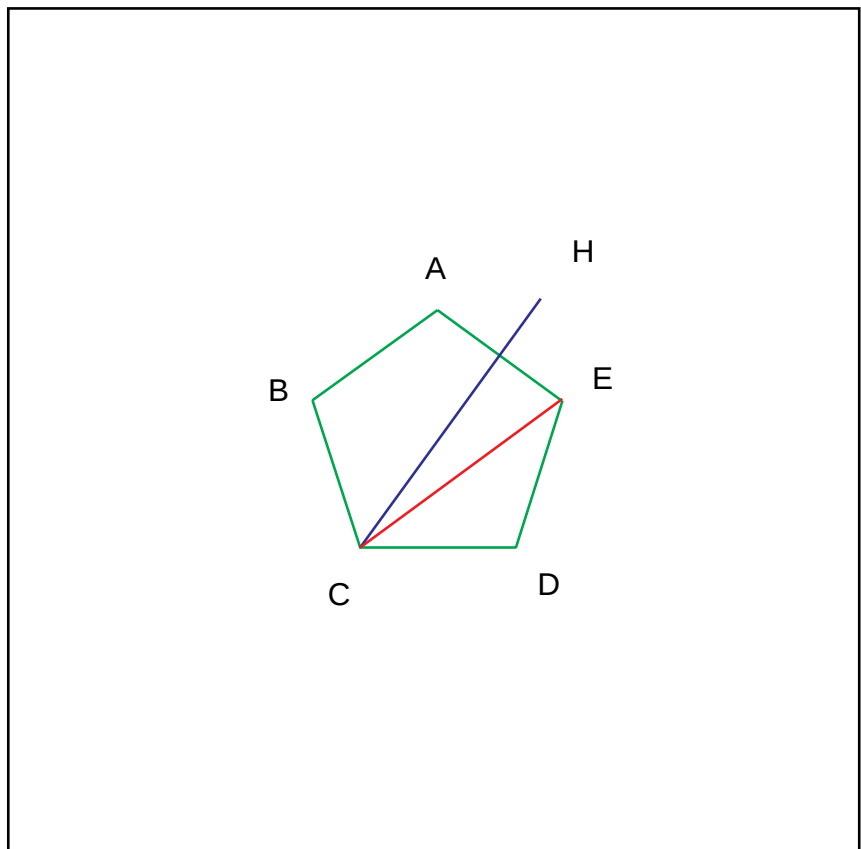
Swing DB around D.



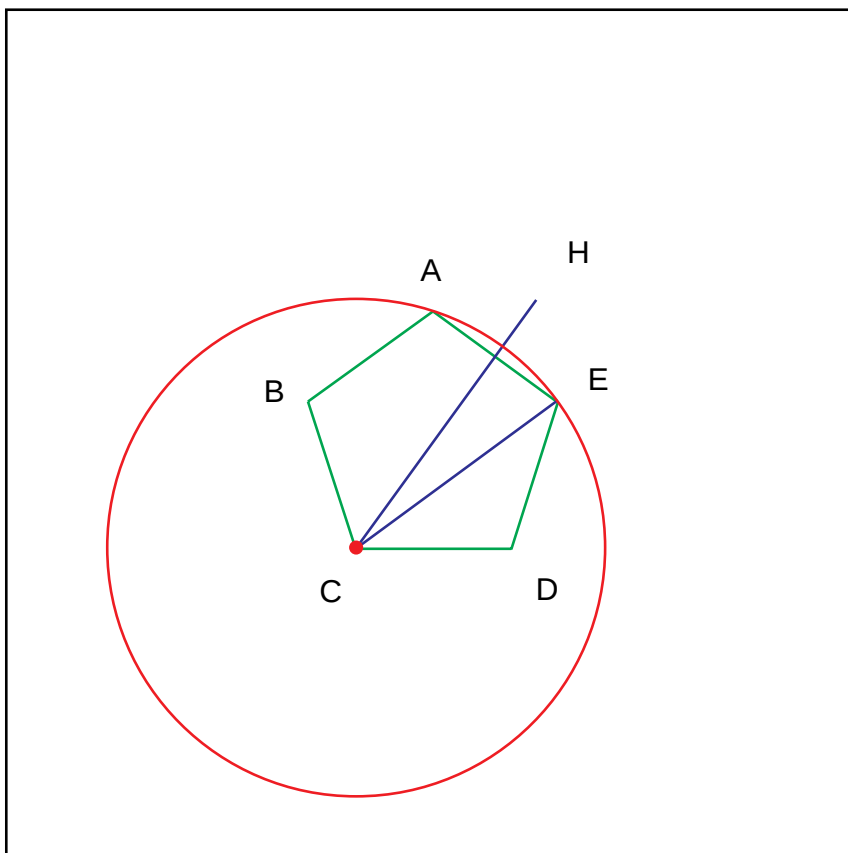
GOSUB I.9 for CDE.
Do not relabel.



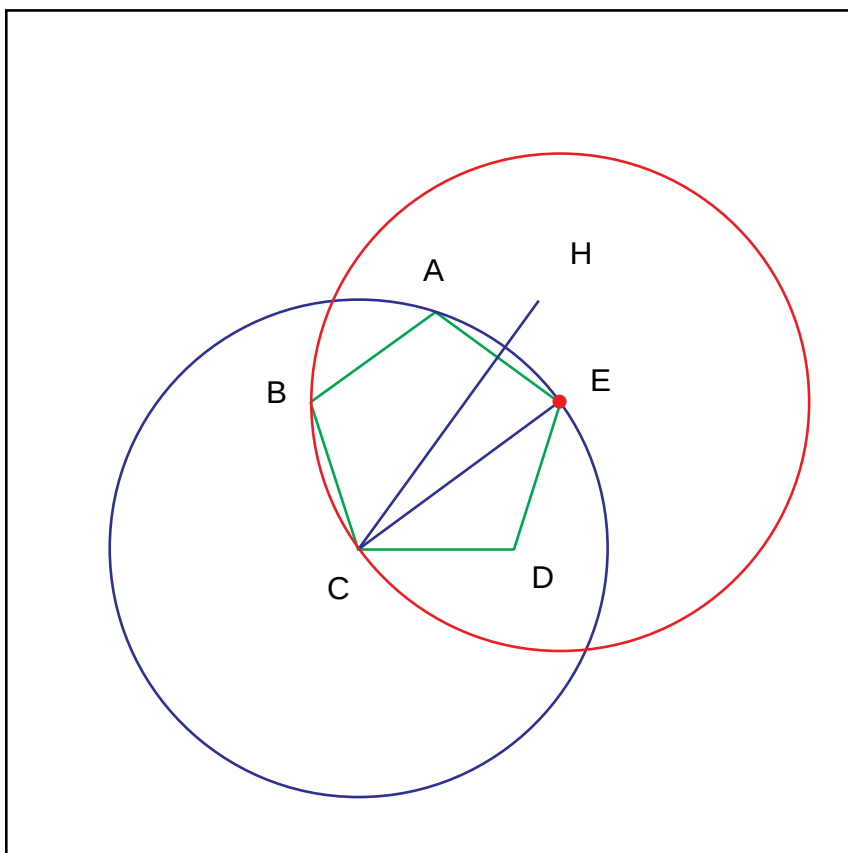
I.9:6. let CE be joined,



Swing CE around C.



Swing EC around E.



Connect the crossing points.

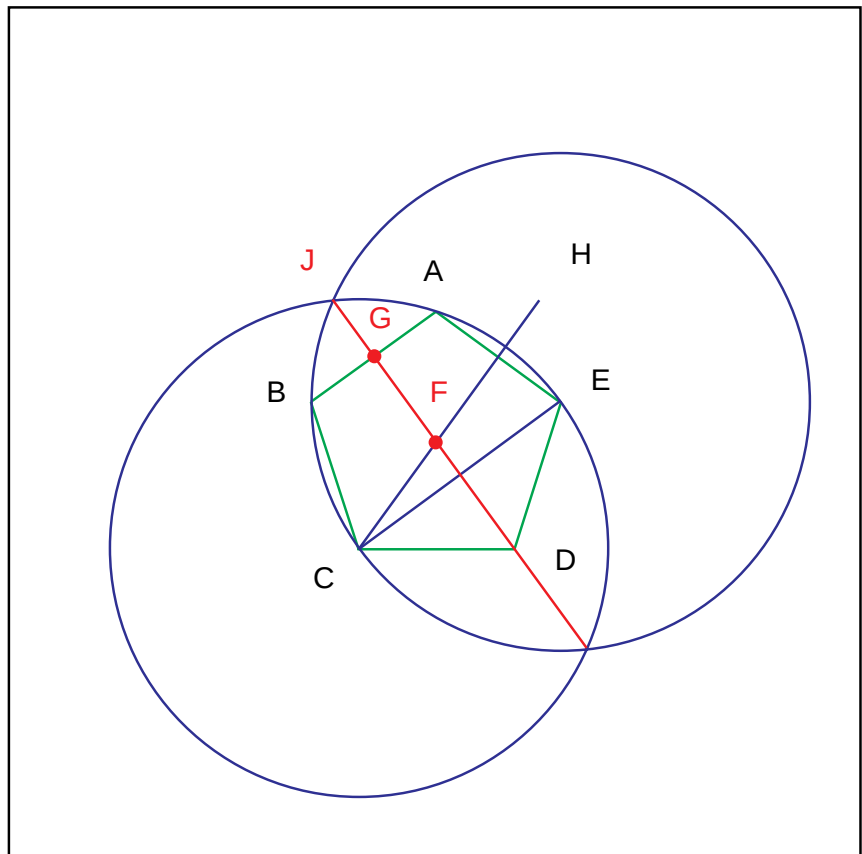
We do not need JC, JE.

Let F be the point in which the new line crosses CH. Let G be the point in which the new line crosses AB.

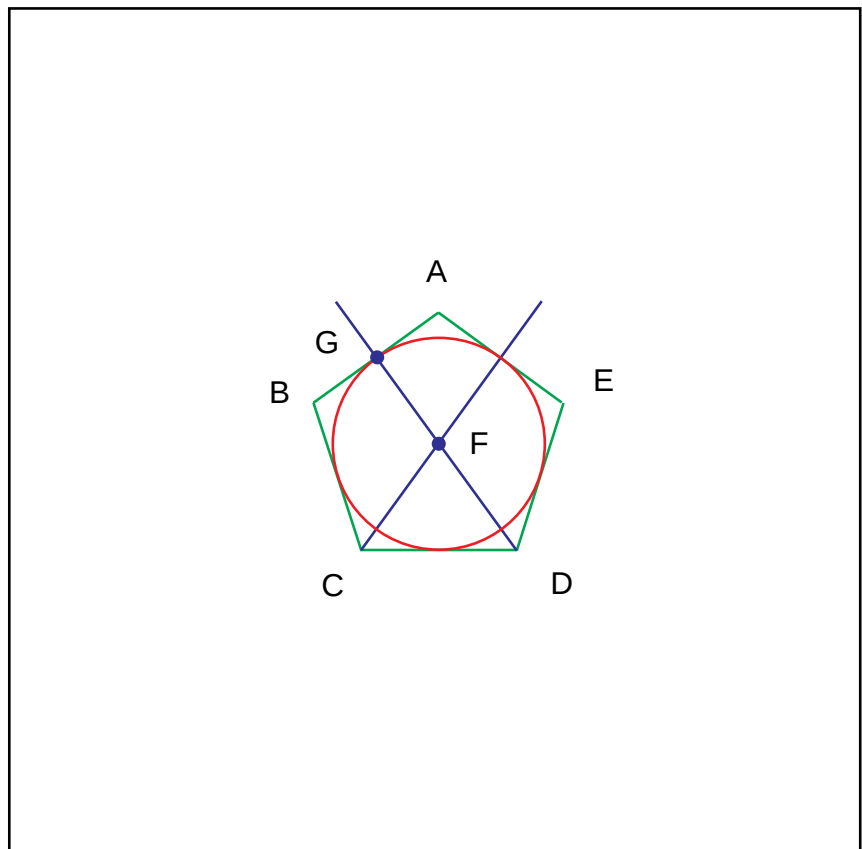
Cleanup.

RETURN to I.9:6.

RETURN to IV.13:7.



IV.13:50. Therefore the circle described with centre F and distance one of the straight lines FG... will touch the straight lines AB, BC, CD, DE, EA.



Cleanup.

DONE.

