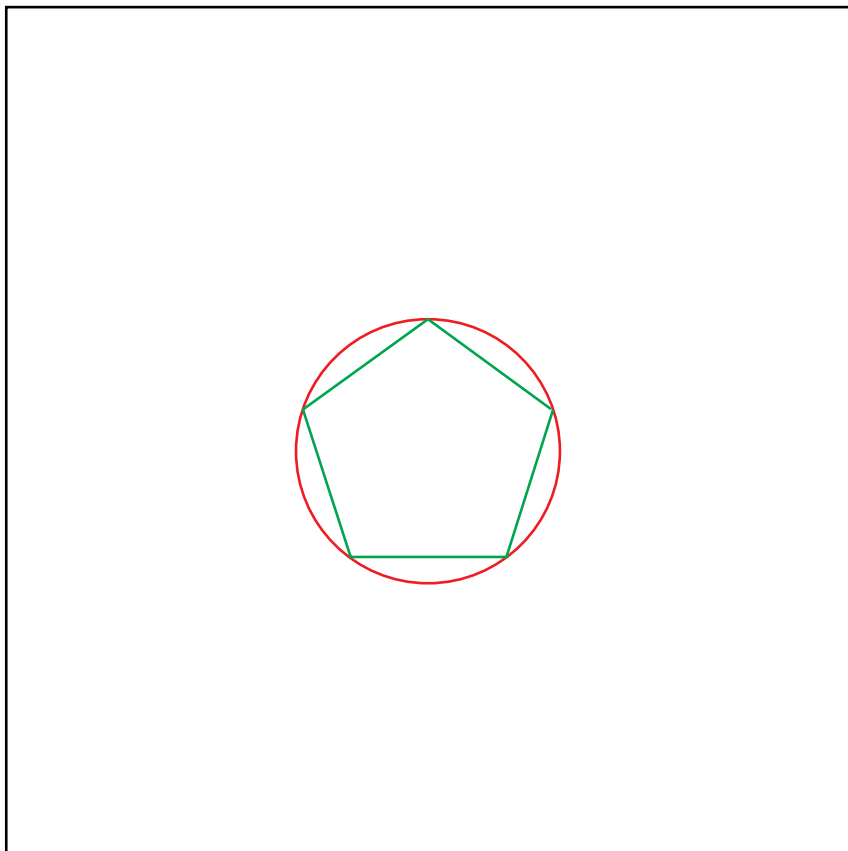


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## Construction 36: Book IV, Proposition 14

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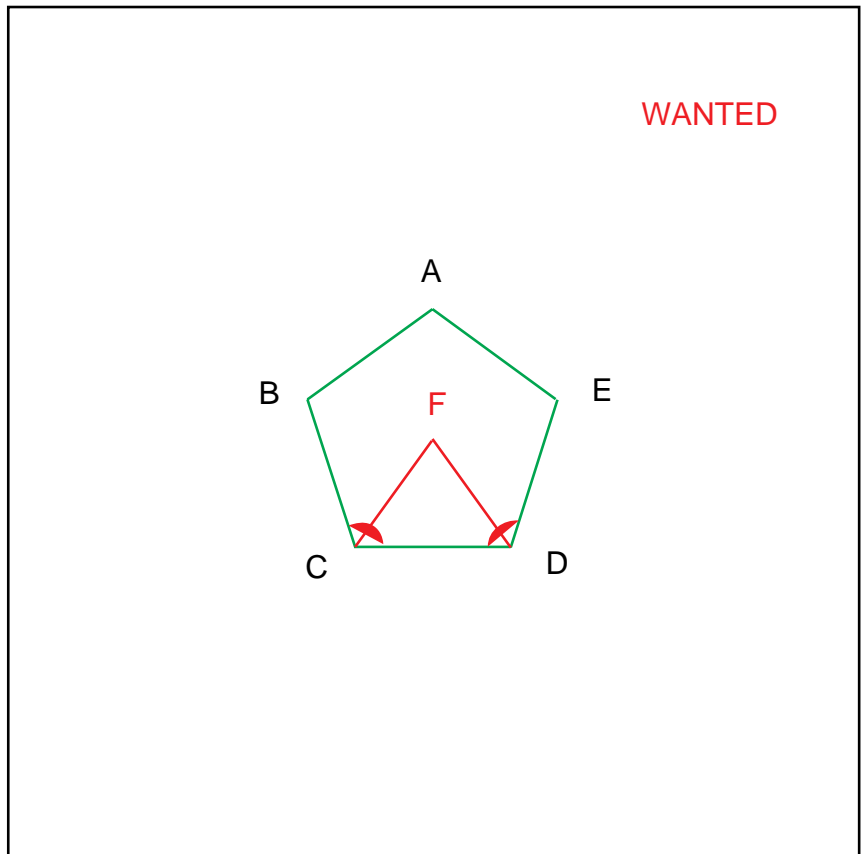
*About a given pentagon, which is equilateral and equiangular, to circumscribe a circle.*



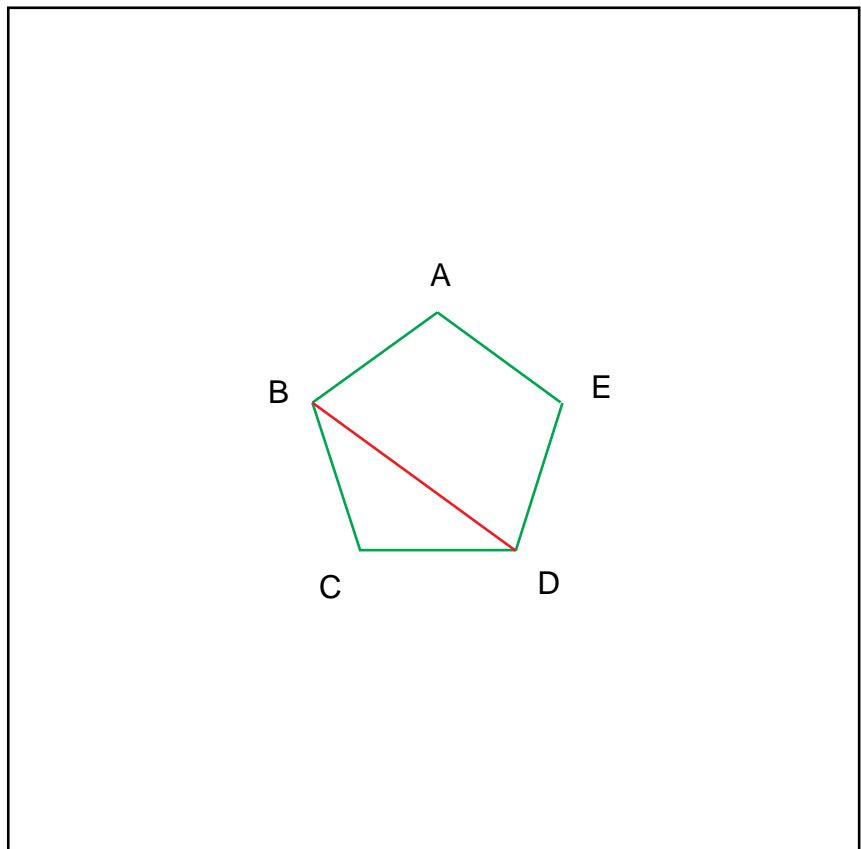
IV.14:3. Let ABCDE be the given pentagon;

IV.14:7. Let the angles BCD, CDE be bisected by the straight lines CE, DF respectively, ([I.9], C#4)

GOSUB I.9 for BCD.  
Do not relabel.

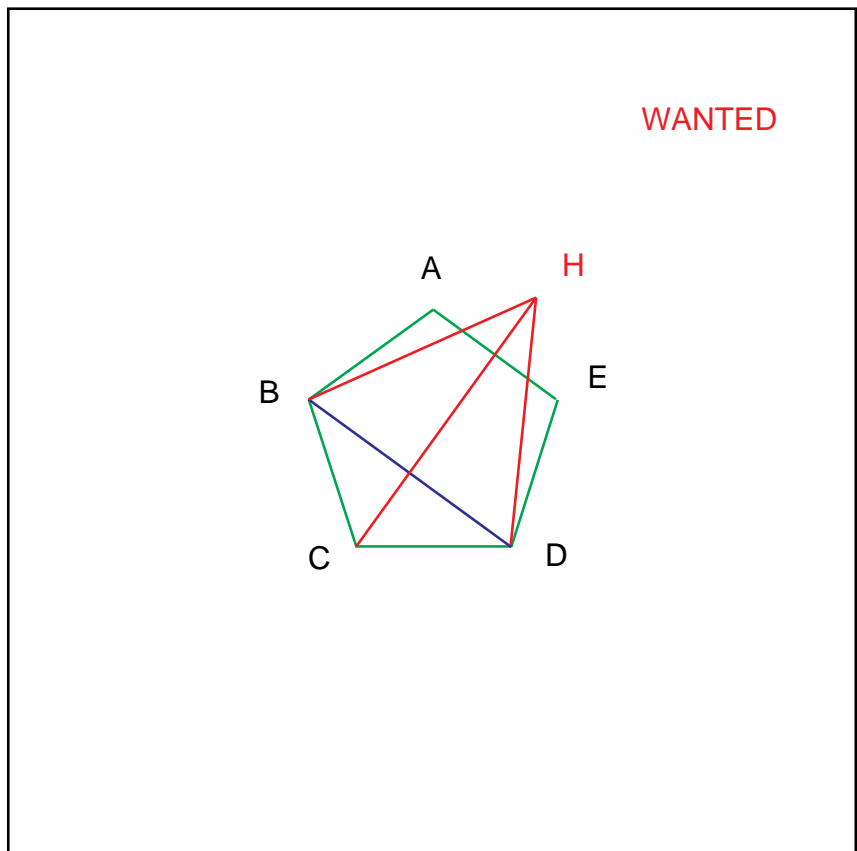


I.9:6. let BD be joined,

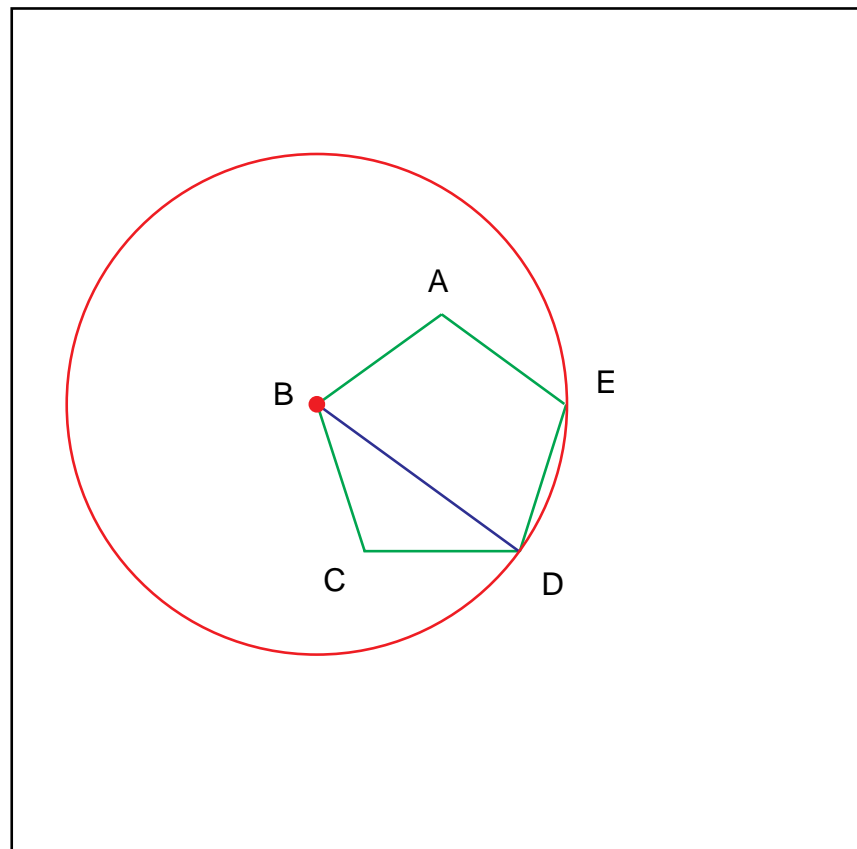


I.9:6. and on BD let the equilateral triangle BDH be constructed; let CH be joined.

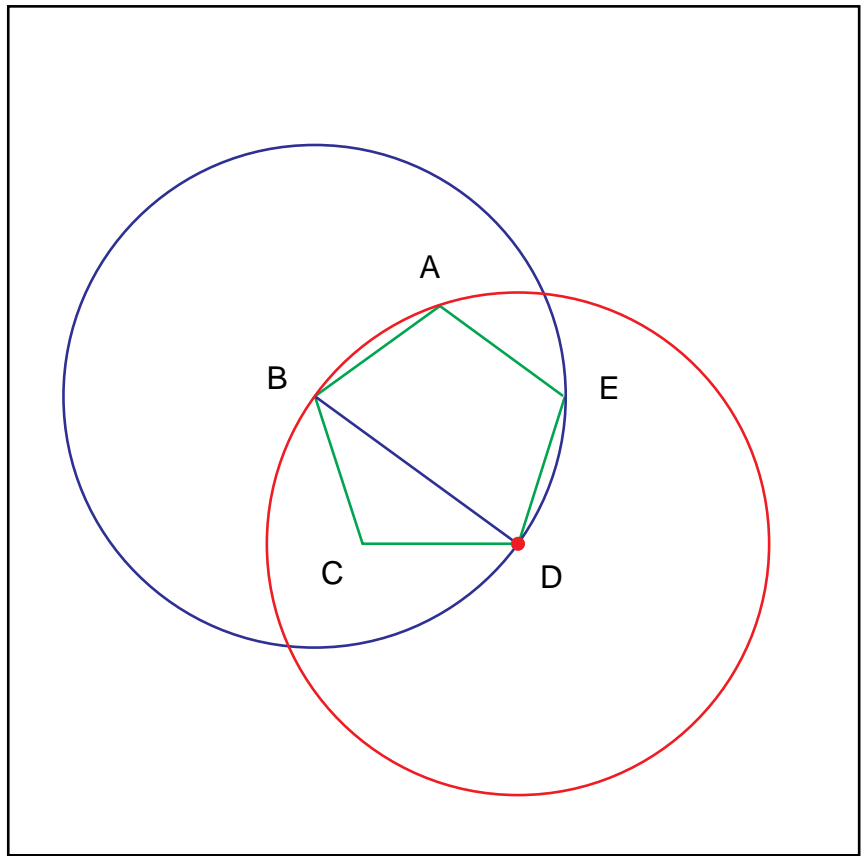
GOSUB I.1.



Swing BD around B.



Swing DB around D.



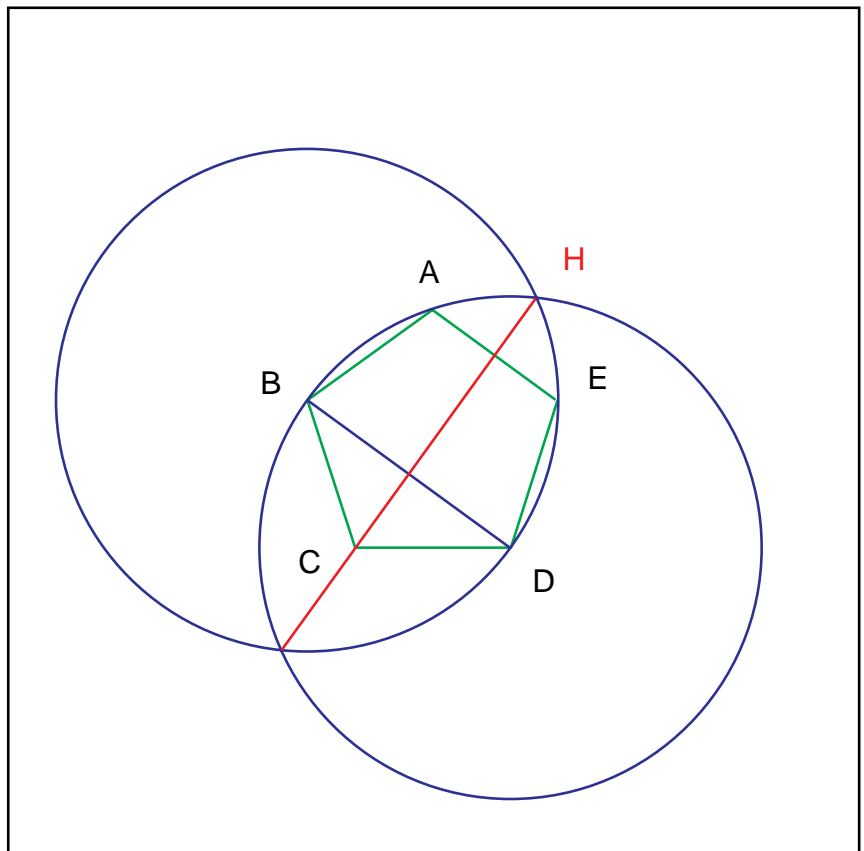
Connect the crossing points.

We do not need BH, DH.  
Cleanup. Preserve CH.

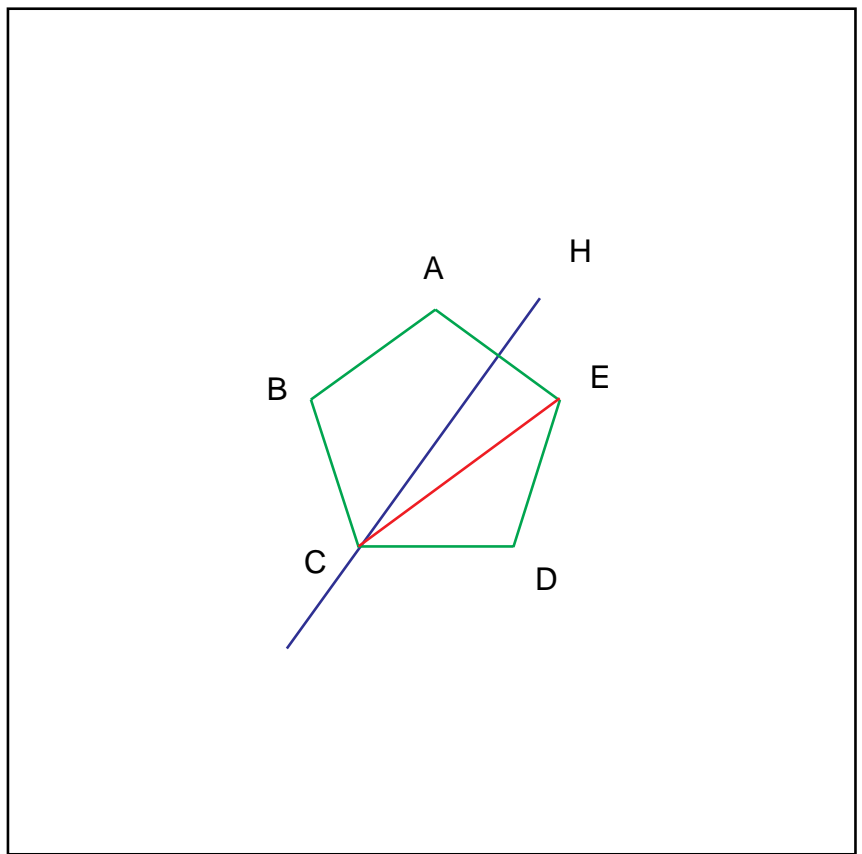
RETURN to I.9:6.

RETURN to IV.13:7.

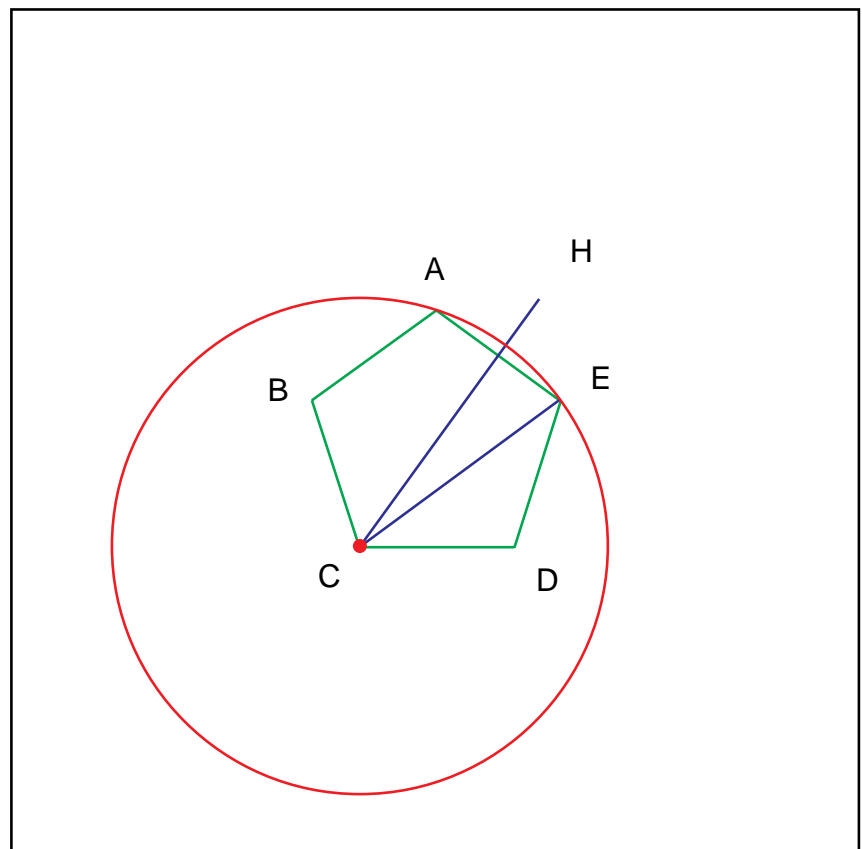
GOSUB I.9 for CDE.  
Do not relabel.



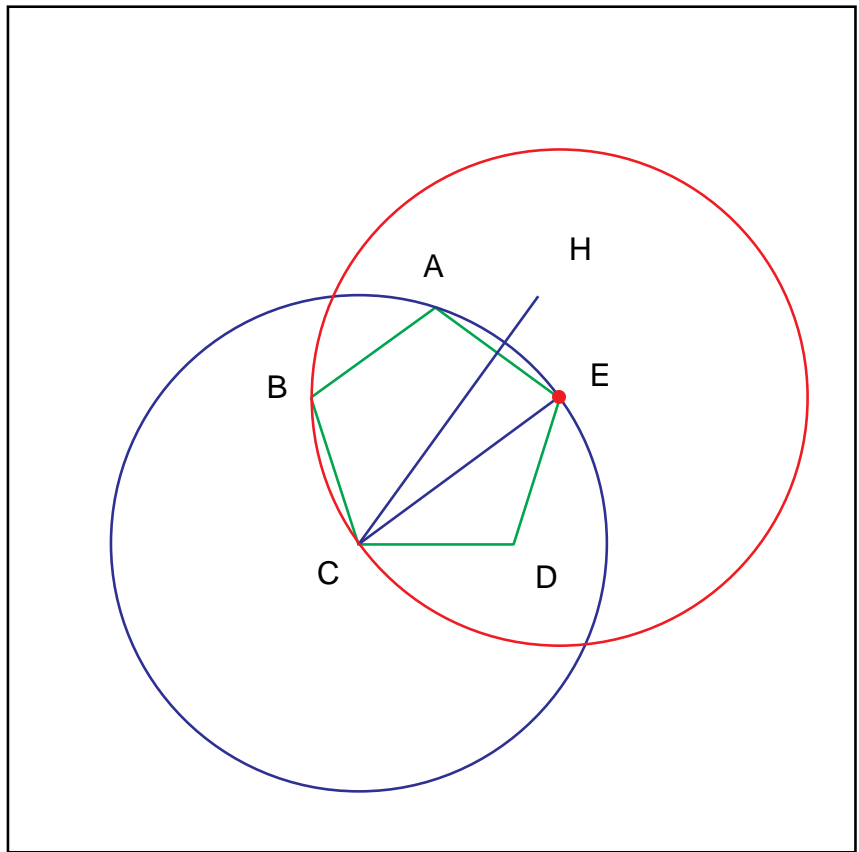
I.9:6. let CE be joined,



Swing CE around C.



Swing EC around E.

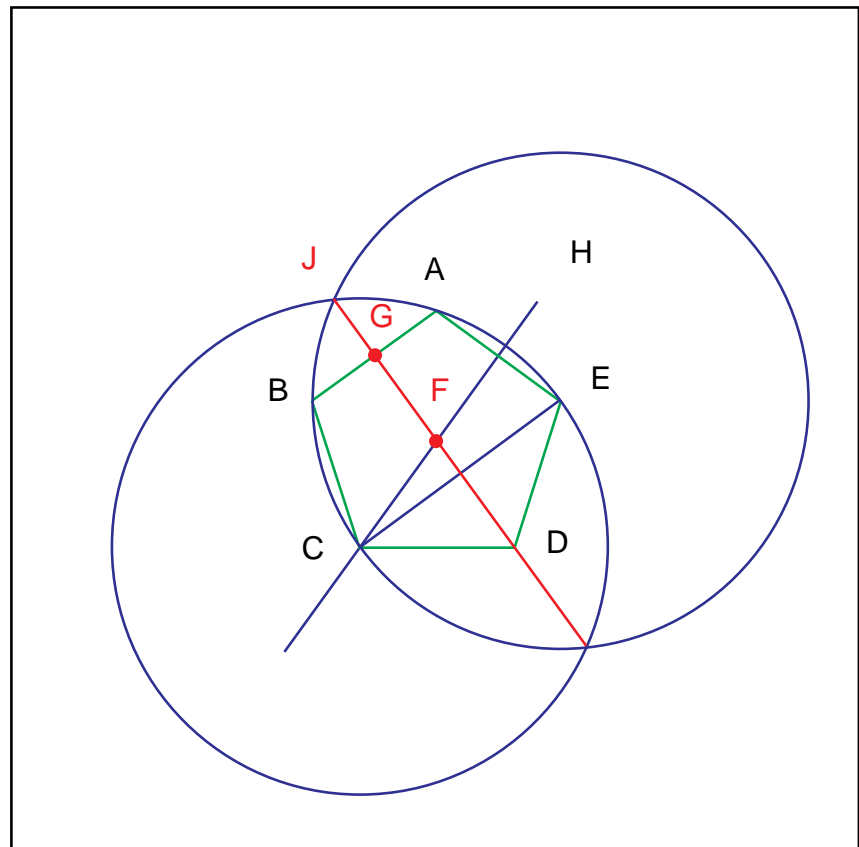


Connect the crossing points.

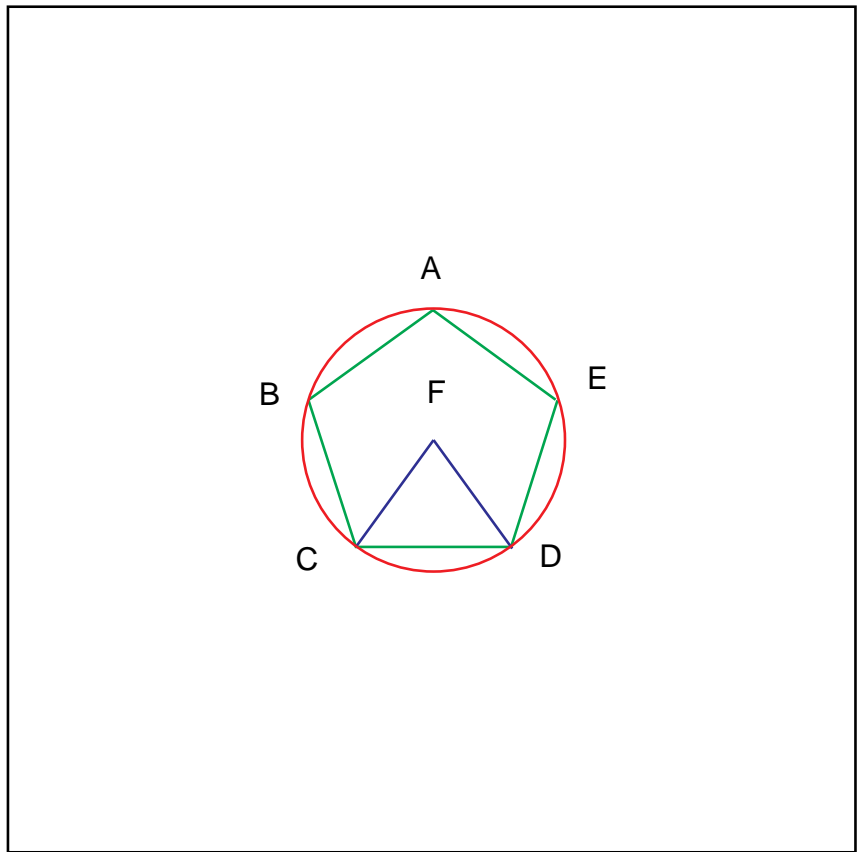
We do not need JC, JE.  
 Let F be the point in which the new line crosses CH. Let G be the point in which the new line crosses AB.

Cleanup.  
 RETURN to I.9:6.

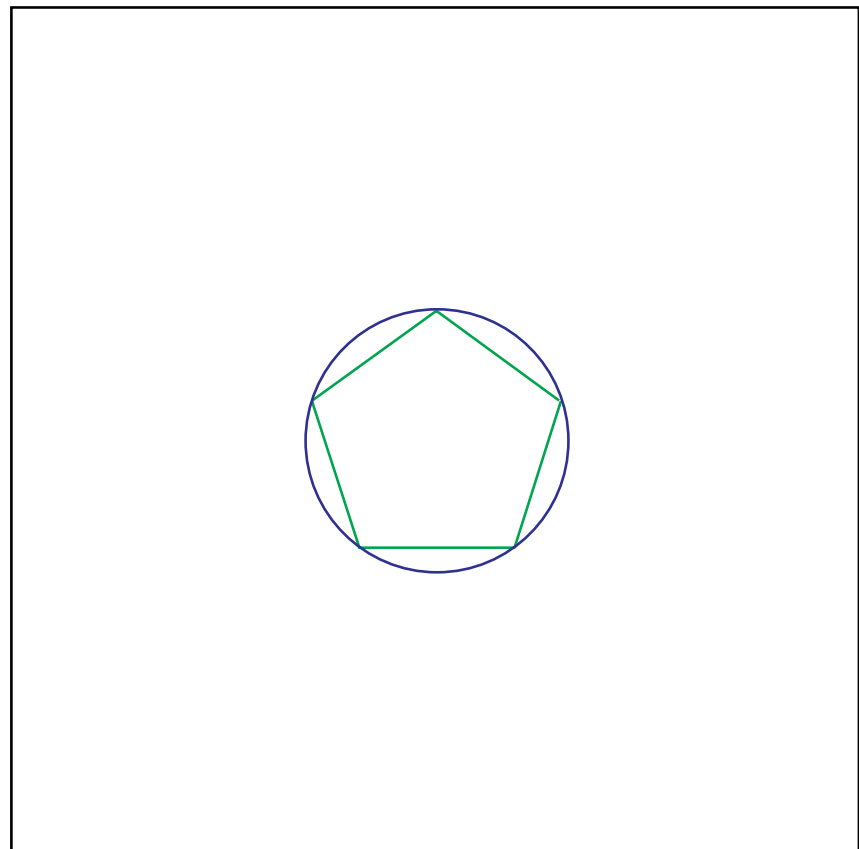
RETURN to IV.14:7.



IV.113.50.. Therefore the circle described with centre F and distance one of the straight lines FA, FB, FC, FD, FE will pass also through the remaining points, and will have been circumscribed.



Cleanup.



DONE.

