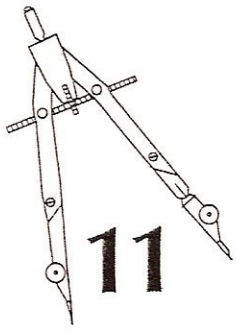
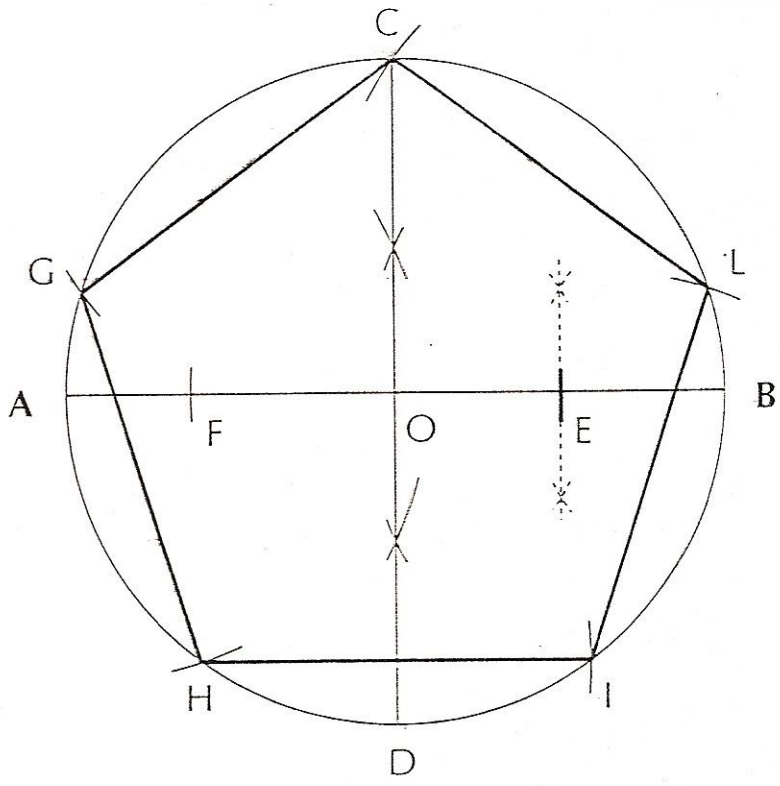


11

Inscribe a Regular Pentagon in a Circle



Given Circle O

1. Draw a diameter and label its endpoints A and B, respectively.
2. Construct another diameter which is the perpendicular bisector of $\overline{AB}$.
3. Label the endpoints C and D, respectively.
4. Bisect $\overline{OB}$ and label its midpoint E.
5. Put the metal tip on E and the pencil tip on C and cut an arc that intersects $\overline{AB}$.
6. Label the point of intersection F.
7. Place the metal tip on C and the pencil tip on F and cut an arc that intersects the circle.
8. Label the point of intersection G.
9. Draw $\overline{CG}$.
10. Without changing the compass setting, put the metal tip on G and cut another arc that intersects the circle.
11. Label the point of intersection H.
12. Draw $\overline{GH}$.
13. Without changing the setting, continue around the circle placing the metal tip on H to cut intersection I. and on I to cut intersection L.
14. Draw $\overline{HI}$, $\overline{IL}$, and $\overline{CL}$.

Now CGHIL is a regular pentagon.

Make sure your compass lead is sharp to insure accuracy. This construction can be very frustrating!