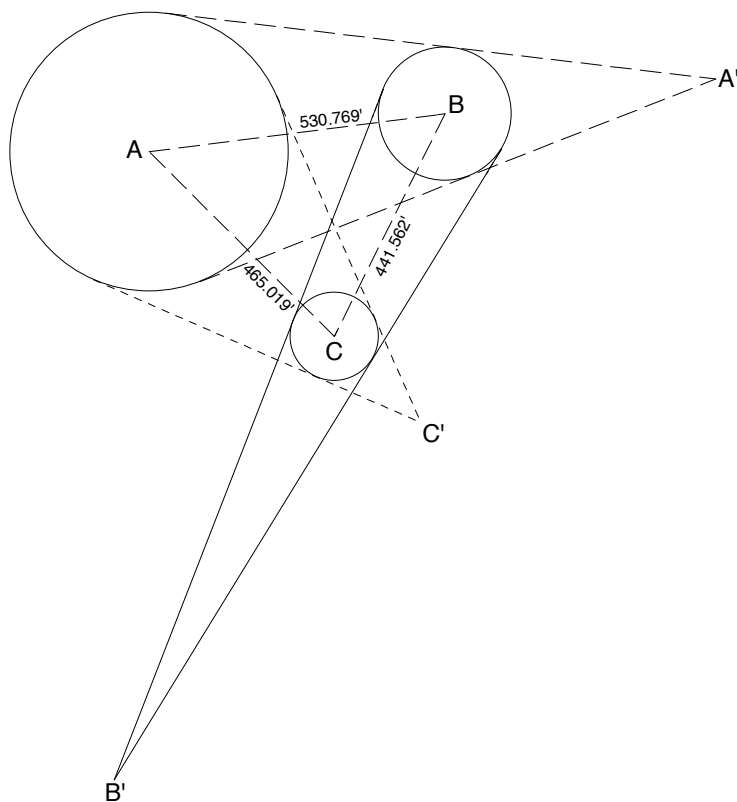


Problem
164

by Dave Lindell, L.S.

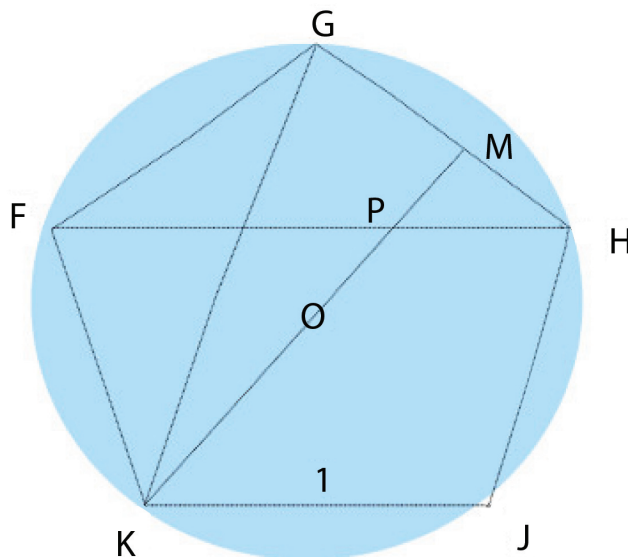
Three circles of radii 247.805', 118.410' and 78.840' have centers 530.769', 441.562' and 465.019' apart, as shown. Common tangents intersect at points A', B' and C'. What is the bearing from A' to C' and C' to B'?



Problem
165

by Benjamin Bloch, Ph.D.

FGHJK is a regular pentagon inscribed in a circle with its center at O. Line segment KM passes through the center of the circle at O and is perpendicular to GH at M. Each of the pentagon sides = 1.



1. Determine \angle s: HJK, FKG, GKM, MKJ, HFK, GFH and MPH.
2. Determine the commonality to all \angle s and arc \angle s.
3. Determine diagonals, FH and GK.
4. Determine the significance of FP/PH.