

PROBLEM CORNER

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Problem 1

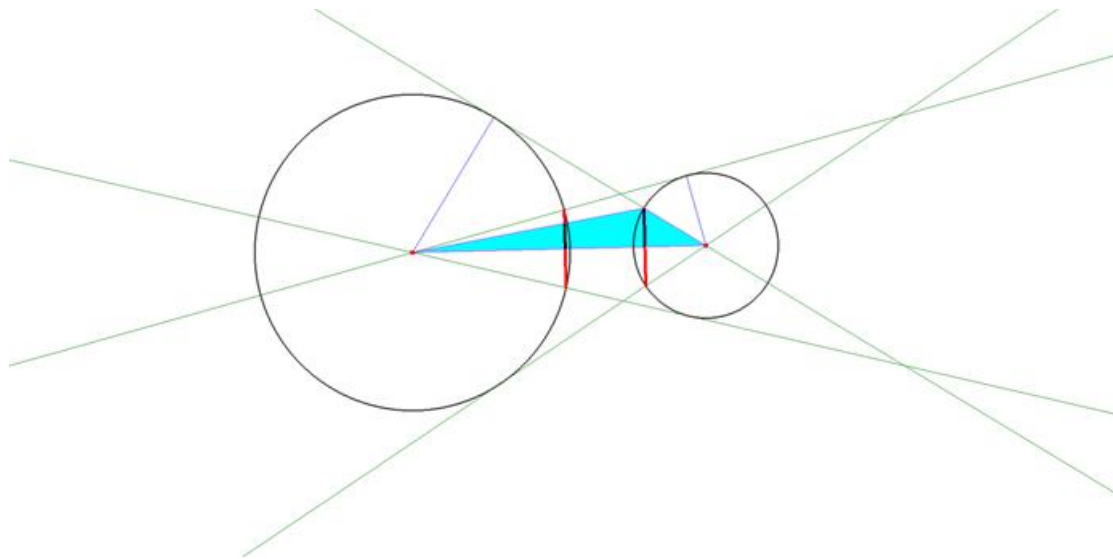
Show that the Bucky ball (truncated icosahedron) can be expressed as the intersection of an octahedron with an icosahedron.

Problem 2

In this problem, the wireframe of a cube is defined as the set formed by the union of the 12 edges. Construct three cubes so that every pair of the three wireframes meet at exact 10 points.

Problem 3

Prove the Eyeball Theorem based on expressing area of the shaded triangle (see <http://sylvester.math.nthu.edu.tw/d2/3problems/2014-10/Hint.html>) in two different ways.



Reference: David Wells, A Dictionary of Curious and Interesting Geometry