Creating Icosahedron

The vertices of an icosahedron centered at the origin with an edge-length of 2 and a circumscribed sphere radius of 2sin(2pi/5) are described by all permutations of the following list::[2]

(0, ±1, ±ϕ)
(±1, ±ϕ, 0)
(±ϕ, 0, ±1)

where $\phi = (1 + \sqrt{5})/2$ is the golden ratio (also written τ). Note that these vertices form five sets of three concentric, mutually orthogonal golden rectangles, whose edges form Borromean rings.