## Kepler-Poinsot Polyhedra

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Inspired by the "<u>Regular Polyhedra Visualization Using Schlafi Symbol Notation</u>" Maple Learn document, the image below contains the four Kepler-Poinsot polyhedra. The polyhedra were graphed in maple, exported as a DXF file, converted to an STL file, and 3D printed.





The polyhedra can be plotted with the following maple code:

with(geom3d): with(plots): with(plottools): with(DocumentTools:-Canvas):

p := polyhedraplot([0, 0, 0], polytype = GreatIcosahedron, scaling = constrained, orientation = [0, 0]):

display(p, axes = none)

You can change the polytype parameter to change what polyhedron is plotted.

Note: To export as a DXF file, you can right-click on the plot, go to export, and then select DXF.