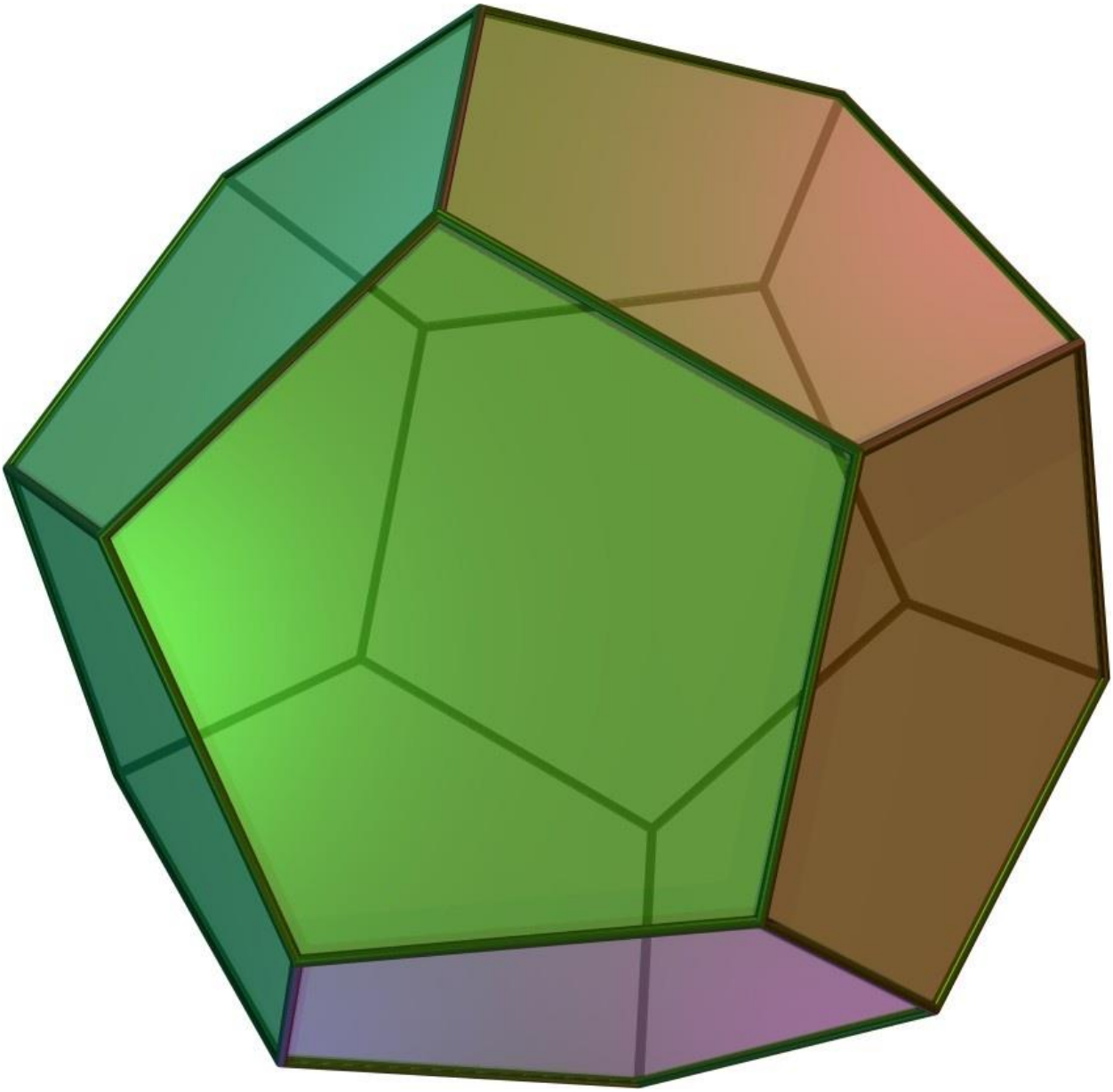
Week 35 class work TEST:

Select your team of at most 4 members

Build and Compute the volume of a Dodecahedron



Given: 12 Regular Pentagons with side length of 16 cm:

Place software on USB.

http://www.mathsisfun.com/geometry/dodecahedron.html

See the site above, rotating dodecagon and more information about dodecagon.

Dodecahedron

Dodecahedron Facts

Notice these interesting things:

- It has 12 Faces
- Each face has 5 edges (a pentagon)
- It has 30 Edges
- It has 20 Vertices (corner points)
- and at each vertex 3 edges meet
- It is one of the Platonic Solids

Appendix A-- Combined Reference Charts

Polyhedron	Volume (s^3)	Volume (r^3)	Surface Area (s^2)	Surface Area (r^2)
Tetrahedron	0.11785113 s^3	0.513200238 r^3	1.732050808 s^2	4.618802155 r^2
Octahedron	0.471404521 s^3	1.333333... r^3	3.464101615 s^2	6.92820323 r^2
Cube	1.0 s^3	1.539600718 r^3	6.0 s^2	8.0 r^2
Icosahedron	2.181694991s^3	2.53615071 r^3	8.660254038 s^2	9.574541379 r^2
Dodecahedron	7.663118963 s^3	2.785163863 r^3	20.64572881 s^2	10.51462224 r^2
Cube Octahedron	2.357022604 s^3	2.357022604 r^3	9.464101615 s^2	9.464101615 r^2
Rhombic Dodecahedron	8.485281375 r^2 (distance to 6 octahedral vertices)	3.079201436 s^3	2.0 r^3 (distance to 6 octahedral vertices)	11.3137085 s^2
Icosa Dodecahedron	13.83552595 s^3	3.266124627 r^3	29.30598285 s^2	11.19388937 r^2