

CMSC 23700
Fall 2003

Introduction to Computer Graphics

Homework 4
Due November 20

1. Consider a *closed manifold triangle mesh* of N faces. How many edges does the mesh have?
2. Assuming 4 bytes per index, how many bytes are required for the *winged-edge* representation of an icosahedron? Do not count the vertex data (*i.e.*, position), but just the topological information.
3. Diagram a scenegraph for a wheel with six spokes at 60-degree intervals. Assume that your geometric primitives are canonical cylinders and tori (*i.e.*, doughnuts).