COSC 338 – Exam #1
Review Questions
Spring 2008

1.) What are the three basic entities in an imaging system?

2.) Describe the pinhole camera model.

3.) What does it mean if a camera has infinite depth of field?

4.) Describe the pen and plotter model and the methods needed.

5.) Describe the turtle graphics system and the methods needed.

6.) Draw and describe a basic graphics pipeline with 4 stages.

7.) What is the Sierpinski Gasket. What is the pseudocode for creating a Sierpinski Gasket using random point with subdivision and recursive subdivision (two sets of code).

8.) Give the code to create a point in 3 dimensions at 200, 300, 400.

9.) In a standard main function, what functions do you need to call to properly initialize OpenGL? Provide the code for a single buffered, RGB system with a window size of 500 x 500 and name "Tests are so Fun!".

10.) What's the difference between a logical and a physical input device. Give examples of each.

11.) Describe the three main input modes that OpenGL handles.

12.) Describe the problem that relates to hidden surface removal. What is the basic method that we are using currently?

13.) What are the two coordinate systems that we typically reference in regards to a graphics system?

14.) What is the default viewing volume set up by OpenGL (what coordinates)? Give the code to change the coordinate system to go from 0 to 500 on the X, Y and Z axis.

15.) List and describe 5 major function groups provided by a 3D API.

16.) What is the difference between additive and subtractive color? What does a typical graphics system use?

17.) Describe how an indexed color system works.

18.) What are the three properties that are required for a polygon to render correctly?

19.) Give the code to create a triangle fan with 6 points. Draw what this would look like.

20.) Give the basic idea behind the sphere approximation code from your book and provided in class.