Exam #1 - Review Sheet - Ramsey SP09
CSI 494 SpTp: Computer Graphics

- Line Drawing Algorithms: DDA, Midpoint, incremental calculations, integer vs. floating point, brute-force, derivations, slope regions
- Aliasing: Jaggies, Stair-casing, Anti-aliasing, increasing resolution, unweighted area sampling, weighted sampling
- Clipping: brute-force, solving simultaneous equations, trivial reject, trivial accept, Cohen-Sutherland algorithm, clip-window, end point bit codes,
- Polygon Filling: brute-force, intersecting with scanline, Edge Table, Active Edge Table
- Vectors: description, right-handed system, adding, scalar multiple, dot-product, cross-product
- Meshes: file format, vertex order (counter-clockwise), normals, back-face culling
- Transformations: 2D and 3D, points, scale, translation, rotation, homogenous coordinates, rigid, affine
- Matrices: multiplication, for use in transformations and viewing
- Projection: orthographic, perspective, homogeneous coordinates
- Visibility: painter's algorithm, z-buffer, depth test
- Colors: as unsigned bytes or as floats
- Viewing Transformation: computing uvw, uvw Matrix
- Stages of Vertex Transformations: Object, Modelview, Projection, Perspective, Viewport
- GLUT: event based programming, keyboard, mouse, rubberbanding
- OpenGL: Vertex, Color, PushMatrix, PopMatrix, Translate, Scale, Rotate, Begin, End, PostRedisplay, LoadIdentity, LookAt, Ortho, Frustrum, Viewport, Perspective, Enable, Disable, Depth