Name:

Student ID:

Homework 4

1 Multiple Choice

1. Perspective transformations A) are linear transformations B) keep parallel lines parallel C) are affine transformations D) all of the above E) none of the above

2 True/False

T/F Given invertible matrices M_1, M_2, and M_3, $(M_3 M_2 M_1)^{-1} = M_1^{-1} M_2^{-1} M_3^{-1}$.

T/F If a function is linear then it is also affine.

T/F All rotations in 3D space can be specified with 2 real numbers.

T/F Antialiasing is a technique for adding shadows in 3D renderings.

3 Written Problems

What is the matrix on top of the current matrix stack after the following functions are called?
glLoadIdentity();
glScalef(2,2,1);
glPushMatrix();
glScalef(1,1,1);
glTranslatef(1,0,0);
glPushMatrix();
glTranslatef(1,0,0);
glPopMatrix();
glPopMatrix();
glTranslatef(2,0,0);