Computer Graphics – Matrix Gauntlet

Objective

The purpose of this document is to help guide you in your creation of matrix math functions. This sheet will not show you how to do the operations, this was taught in previous courses, but is designed in a way for you to test your functions and see if you are getting the same results. We will go over a few operations such as “vector (multiply) matrix”, “matrix (multiply) matrix”, and “matrix inverse”. All of these operations are row-major matrix operations.

Vector (multiply) Matrix = Vector

3 (multiply) 3x3

4 (multiply) 4x4

Matrix (multiply) Matrix = Matrix

*3x3 (multiply) 3x3*

*4x4 (multiply) 4x4 (example 1)*

*4x4 (multiply) 4x4 (example 2)*

*4x4 (X rotation)*

*4x4 (Y rotation)*

*4x4 (Z rotation)*

Matrix4x4 Inverse