Common Matrices in OpenGL

Indices of Column Major Order

0	4	8	12
1	5	9	13
2	6	10	14
3	7	11	15

Translation Matrix

1	0	0	x
0	1	0	y
0	0	1	z
0	0	0	1

Scale Matrix

x	0	0	0
0	y	0	0
0	0	z	0
0	0	0	1

Rotation Matrices

(Trig function of the angle of rotation in radians)

X Rotation

1	0	0	0
0	cos	-sin	0
0	sin	cos	0
0	0	0	1

Y Rotation

cos	0	sin	0
0	1	0	0
-sin	0	cos	0
0	0	0	1

Z Rotation

cos	-sin	0	0
sin	cos	0	0
0	0	1	0
0	0	0	1

Perspective Matrix

Where f is the frustum scale calculated with the cotan(fovy / 2)

f/aspect ratio	0	0	0
0	f	0	0
0	0	-(far + near)/(far - near)	-2(far * near)/(far - near)
0	0	-1	0

Order of Matrix Multiplication

Perspective * Scale * Rotation * Translation * Position