1. Modeling a (part of) a Solar System

Fix the following code so that it correctly models the Earth and Moon positions. You can insert Push/Pop commands and rearrange any lines of code you wish.

```
PushMatrix
Scale(7917,7917,7917)       // Set Earth diameter
Translate (AU,0,0)           // AU = distance from Earth to Sun
Rotate 360*days/365,(0,1,0) // Rotation around sun
Scale (2159,2519,2519)      // Set moon diameter
Rotate 360*days/27,(0,1,0)  // Moon rotation around Earth
Translate 238856,0,0        // Earth to moon distance
DrawMoon
DrawEarth
PopMatrix
```
2. **Memory Layout of Matrices in WebGL**

Suppose we have the following transformation matrix:

\[
\begin{bmatrix}
  a & b & c & t_x \\
  d & e & f & t_y \\
  g & h & i & t_z \\
  0 & 0 & 0 & 1
\end{bmatrix}
\]

Write down the column-major layout of the matrix in memory:

Write down the row-major layout of the matrix in memory:

3. **View Transformation**

What viewing transformation matrix is produced by having the eyepoint at (1,0,0) with the lookat point at (4,0,0) and an up vector of \(<0,1,0>\)?