Overview
This assignment is intended to prepare you for part 4 of your raytracer assignment. You
will need to compute inverted matrices and some transforms. This assignment will allow
you to build necessary functions and test their validity. You may write these functions as
a part of your raytracer or a lone assignment.

a. Create a scale matrix, with sx = 2, sy = 0.5 and sz = 3. Compute the
   inverse of this matrix and show why it is reasonable.

b. Create a translation matrix, with tx = 1, ty = -3, tz = 2. Compute the
   inverse of this matrix and show why it is reasonable.

c. Create a rotation matrix, which is a rotation around y by 90 degrees.
   Compute the inverse of this matrix and show why it is reasonable.

d. Compute the composite matrix of these transforms, assuming that the
   object is first scaled, then rotated, then translated. Compute the inverse
   of this transform matrix and multiply the inverse with the composite matrix
   to show that the result is the identity matrix.

e. Multiply the vector (-1, -1, -1) by this matrix and show your results. Be
   able to argue why your results are correct.