Math 155A - Fall 2022 - Quiz #5 - October 11

Name:

PID:

1. For each of the four transformations (a)-(d) of $\mathbb{R}^3$, give a 4×4 matrix that represents it over homogeneous coordinates.

(a) The translation $T_{\langle 1,0,2 \rangle}$.

(b) The non-uniform scaling $S_{\langle 3,2,1 \rangle}$.

(c) The rotation $R_{\pi,\mathbf{k}}$.

(d) The rotation $R_{\pi,\langle 1,0,1 \rangle}$.