Math 54, Quiz 6 Sections 202/203 GSI Carter

Name:

1. For each of the following statements, write the word "true" or "false."

   (a) Let P be the matrix corresponding to some orthogonal projection. Then $P^5 = P^3$.

   (b) Let A be a matrix with orthogonal columns. Then $A^T A = I$.

2. Let $\mathbf{c}_1 = (1, 1, 1)$ and $\mathbf{c}_2 = (2, 0, 1)$. Find the matrix for the orthogonal projection onto the subspace of $\mathbb{R}^3$ spanned by $\mathbf{c}_1$ and $\mathbf{c}_2$.