1. Two linear transformations $T_1$ and $T_2$ on a vector space $V$ are equivalent if there exist ordered bases $\beta_1, \beta_2, \gamma_1,$ and $\gamma_2$ such that $[T_1]_{\gamma_1}^{\beta_1} = [T_2]_{\gamma_2}^{\beta_2}$. Prove or disprove: If two linear transformations on a finite dimensional vector space have the same rank then they are equivalent.

2. Do Problem 6 (b) and (f) in Section 3.2.

3. Do Problem 14 in Section 3.2.

4. Do Problem 19 in Section 3.2.

5. Do Problem 20 (b) in Section 3.2.