

PROBLEMS IN LINEAR ALGEBRA

NIVAS

- (1) Prove or disprove: If $X \succeq Y$, and f is a function such that $f(X) \succeq f(Y)$, then f is necessarily concave. Prove or disprove the converse: if f is concave, then $f(X) \succeq f(Y)$ necessarily.
- (2) Prove or disprove: the only symmetric full-rotation matrix is the identity.