

## Part of Homework 4:

I. Show that the relation of similarity is reflexive ( $A \approx A$ ), symmetric ( $A \approx B \Rightarrow B \approx A$ ) and transitive ( $A \approx B, B \approx C \Rightarrow A \approx C$ ).

Recall that

$$A \approx B \Leftrightarrow \exists P \text{ such that } B = P^{-1}AP.$$