

Math 316 **Extra credit assignment** (7 points)

due Wednesday, 05/03

$$\text{Let } A = \begin{bmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ 0 & 3 & 0 & 0 & 3 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 3 & 0 & 0 \\ 0 & 0 & 0 & 0 & 3 & 3 \\ 0 & 0 & 0 & 0 & 0 & 3 \end{bmatrix}$$

Find matrices P and J such that $P^{-1}AP = J$ is the Jordan canonical form of A .
Show all your work.