

MA 587/687

Name (Print last name first):

Quiz 4

Question 1

Consider a Markov chain with transition matrix

$$P = \begin{bmatrix} 1 & 0 & 0 & 0 \\ .2 & 0 & .8 & 0 \\ 0 & .2 & 0 & .8 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

What is the mean time to absorption. Justify/explain any formulas you use.

Question 2Using P from part 1, if j th row represents the transition probabilities for leaving state j , what is the probability of hitting 4 before 1 (the 2 absorbing states) starting from 2?