

MAP 4175 / 5177
Quiz 3

Name: _____
Date: September 18, 2018

Each problem is worth 10 points. Show all work for full credit, and use correct notation.

1. Males have a constant force of mortality of 0.05 and females have a constant force of mortality of 0.04. For a population of 40-year olds, 40% are male. Determine q_{50} for this population of 40-year olds.

2. Each individual has a constant force of mortality, μ , where μ is drawn from the uniform distribution on the interval $[0.01, 0.05]$. Determine the value of ${}_{10}p_x$

For Numbers 3 and 4, use the L-TAM Illustrative Life Table to determine

3. ${}_{10}q_{30}$

4. ${}_{5|10}q_{30}$

5. Suppose the force of mortality is constant over the 2-year period centered at age 40. Determine the value of the force of mortality that is consistent with the mortality from the L-TAM Illustrative Life Table.