

MAP 4175 / 5177
Quiz 1

Name: _____
Date: September 4, 2019

Show all work for full credit, and use correct notation.

1. Given ${}_k|q_{70} = 0.1(k + 1)$ for $k = 0$ and 1, determine ${}_2p_{70}$

2. Given $T_{40} = 52.8$, determine the value of the difference $K_{40}^{(4)} - K_{40}^{(12)}$

3. Given $\int_0^{20} f_{70}(t)dt = 0.95$ and $\int_{30}^{\infty} f_{40}(t)dt = 0.2$, determine ${}_{30|20}q_{40}$

4. Given

x	q_x
90	0.3
91	0.4
92	0.5
93	0.6

determine the value of the deferred mortality probability ${}_{1|2}q_{91}$

5. Given $q_{80} = 0.1$ and $E[\text{Min}(K_{80}, 2)] = 1.62$, determine p_{81}