

MLC Module 1 Section 4 Exercises

- Given $l_{50} = 600$ and $l_{51} = 560$, determine each of the following:
 - $l_{50.25}$ using the UDD assumption
 - $l_{50.6}$ using the CF assumption
- Given $l_{47} = 1000$, and $p_{47} = .95$, and ${}_2p_{47} = .90$ determine each of the following:
 - $l_{48.5}$ using the UDD assumption
 - $l_{48.3}$ using the CF assumption
- Using ILT mortality, determine each of the following:
 - ${}_{0.2}q_{65.3}$ using the UDD assumption
 - ${}_{1.5}p_{72.2}$ using the CF assumption
- Given $q_{30+k} = 0.1 + 0.05k$ for $k = 0, 1, 2$, and 3 , determine each of the following:
 - ${}_{0.2}q_{31}$ using the UDD assumption
 - ${}_{1.5}p_{32}$ using the CF assumption
 - ${}_{0.4|0.6}q_{30.8}$ using the UDD assumption
 - ${}_{1.7|0.8}q_{31}$ using the CF assumption
- Given ${}_k|q_{50} = 0.01(k + 1)$ for $k = 0, 1, 2$, and 3 , determine each of the following:
 - ${}_{0.2}q_{50}$ using the UDD assumption
 - ${}_{1.5}p_{51}$ using the CF assumption
 - ${}_{0.6|0.4}q_{50.8}$ using the UDD assumption
 - ${}_{1.8|0.7}q_{51}$ using the CF assumption
- Given $q_k = 0.15 - .05k$, for $k = 0, 1$, and 2 , determine
 - ${}_t p_1$ for $0 \leq t \leq 1$ using the UDD assumption
 - ${}_t p_2$ for $0 \leq t \leq 1$ using the UDD assumption
- From a population of 1000 30-year olds, you are given ${}_n d_{30} = 20n$ for $0 \leq n \leq 20$ and ${}_n d_{50} = 30n$ for $0 \leq n \leq 20$. Determine ${}_{30}p_{35}$.
- Given ${}_t p_{30} = (.9)^t$ for $0 \leq t \leq 20$ and ${}_t p_{50} = (.8)^t$ for $0 \leq t \leq 20$, determine ${}_{30}p_{35}$.