

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

1. Given ${}_{12.3}p_{32.5} = .995$ determine ${}_{12.3}q_{32.5}$.
2. Given ${}_8p_{30} = .855$ and ${}_4p_{34} = .9$, determine ${}_4p_{30}$.
3. Given ${}_{10}q_{50} = .1$ and ${}_{15}p_{50} = .82$, determine ${}_{10|5}q_{50}$.
4. Given ${}_t p_x = (.9)^t$, determine e_x^o .
5. Given $e_{60} = 24.5$ and $e_{61} = 24$, determine q_{60} .