

Question #154

Answer: C

Let π denote the single benefit premium.

$$\pi = {}_{30}\ddot{a}_{35} + \pi A_{35:\overline{30}|}^1$$

$$\begin{aligned}\pi &= \frac{{}_{30}\ddot{a}_{35}}{1 - A_{35:\overline{30}|}^1} = \frac{(A_{35:\overline{30}|} - A_{35:\overline{30}|}^1)\ddot{a}_{65}}{1 - A_{35:\overline{30}|}^1} = \\ &= \frac{(.21 - .07)9.9}{(1 - .07)} \\ &= \frac{1.386}{.93} \\ &= 1.49\end{aligned}$$