

Question #172

Answer: D

$$\begin{aligned}\ddot{a}_{40:\overline{5}|} &= \ddot{a}_{40} - {}_5E_{40} \ddot{a}_{45} \\ &= 14.8166 - (0.73529)(14.1121) \\ &= 4.4401\end{aligned}$$

$$\begin{aligned}\pi \ddot{a}_{40:\overline{5}|} &= 100,000 A_{45} v^5 {}_5P_{40} + \pi (IA)_{40:\overline{5}|}^1 \\ \pi &= 100,000 A_{45} \times {}_5E_{40} / \left(\ddot{a}_{40:\overline{5}|} - (IA)_{40:\overline{5}|}^1 \right) \\ &= 100,000(0.20120)(0.73529) / (4.4401 - 0.04042) \\ &= 3363\end{aligned}$$