

Question #184

Answer: B

$$1000P_{45}\ddot{a}_{45:\overline{15}|} + \pi \ddot{a}_{60:\overline{15}|} \times {}_{15}E_{45} = 1000A_{45}$$

$$1000 \frac{A_{45}}{\ddot{a}_{45}} (\ddot{a}_{45} - {}_{15}E_{45} \ddot{a}_{60}) + \pi (\ddot{a}_{60} - {}_{15}E_{60} \ddot{a}_{75}) ({}_{15}E_{45}) = 1000A_{45}$$

$$\frac{201.20}{14.1121} (14.1121 - (0.72988)(0.51081)(11.1454)) \\ + \pi (11.1454 - (0.68756)(0.39994)(7.2170)) \times (0.72988)(0.51081) = 201.20$$

where ${}_{15}E_x$ was evaluated as ${}_5E_x \times {}_{10}E_{x+5}$

$$14.2573(9.9568) + (\pi)(3.4154) = 201.20$$

$$\pi = 17.346$$