

Question #102

Answer: D

$$\begin{aligned} 1000 {}_{20}V &= 1000 A_{x+20} = \frac{1000({}_{19}V + {}_{20}P_x)(1.06) - q_{x+19}(1000)}{P_{x+19}} \\ &= \frac{(342.03 + 13.72)(1.06) - 0.01254(1000)}{0.98746} = 369.18 \end{aligned}$$

$$\ddot{a}_{x+20} = \frac{1 - 0.36918}{(0.06/1.06)} = 11.1445$$

$$\text{so } 1000 P_{x+20} = 1000 \frac{A_{x+20}}{\ddot{a}_{x+20}} = \frac{369.18}{11.1445} = 33.1$$