

Question #286

Answer: E

$$A_{50:\overline{2}|}^1 = vq_{50} + v^2 p_{50}q_{51}$$

$$p_x = e^{\left(-\frac{B}{\ln c}\right)c^x(c-1)} = e^{\left(-\frac{0.000005}{\ln(1.2)}\right)1.2^x(0.2)} = e^{-0.0000054848(1.2)^{50}}$$

$$p_{50} = 0.951311$$

$$p_{51} = 0.941861$$

$$A_{50:\overline{2}|}^1 = 0.048689 / 1.03 + 0.951311(0.058139) / 1.03^2 = 0.09940.$$