

184. You are given:

- (i) Annual claim frequencies follow a Poisson distribution with mean λ .
- (ii) The prior distribution of λ has probability density function:

$$\pi(\lambda) = (0.4)\frac{1}{6}e^{-\lambda/6} + (0.6)\frac{1}{12}e^{-\lambda/12}, \quad \lambda > 0$$

Ten claims are observed for an insured in Year 1.

Determine the Bayesian expected number of claims for the insured in Year 2.

- (A) 9.6
- (B) 9.7
- (C) 9.8
- (D) 9.9
- (E) 10.0