

263. You are given:

- (i) The number of claims incurred in a month by any insured follows a Poisson distribution with mean λ .
- (ii) The claim frequencies of different insureds are independent.
- (iii) The prior distribution of λ is Weibull with $\theta = 0.1$ and $\tau = 2$.
- (iv) Some values of the gamma function are

$$\Gamma(0.5) = 1.77245, \quad \Gamma(1) = 1, \quad \Gamma(1.5) = 0.88623, \quad \Gamma(2) = 1$$

(v)

Month	Number of Insureds	Number of Claims
1	100	10
2	150	11
3	250	14

Determine the Bühlmann-Straub credibility estimate of the number of claims in the next 12 months for 300 insureds.

- (A) Less than 255
- (B) At least 255, but less than 275
- (C) At least 275, but less than 295
- (D) At least 295, but less than 315
- (E) At least 315