

41. You are given:

- (i) Annual claim frequency for an individual policyholder has mean λ and variance σ^2 .
- (ii) The prior distribution for λ is uniform on the interval $[0.5, 1.5]$.
- (iii) The prior distribution for σ^2 is exponential with mean 1.25.

A policyholder is selected at random and observed to have no claims in Year 1.

Using Bühlmann credibility, estimate the number of claims in Year 2 for the selected policyholder.

- (A) 0.56
- (B) 0.65
- (C) 0.71
- (D) 0.83
- (E) 0.94