

**39.** You are given the following information about a commercial auto liability book of business:

- (i) Each insured's claim count has a Poisson distribution with mean  $\lambda$ , where  $\lambda$  has a gamma distribution with  $\alpha = 1.5$  and  $\theta = 0.2$ .
- (ii) Individual claim size amounts are independent and exponentially distributed with mean 5000.
- (iii) The full credibility standard is for aggregate losses to be within 5% of the expected with probability 0.90.

Using classical credibility, determine the expected number of claims required for full credibility.

- (A) 2165
- (B) 2381
- (C) 3514
- (D) 7216
- (E) 7938