

273. A company has determined that the limited fluctuation full credibility standard is 2000 claims if:

- (i) The total number of claims is to be within 3% of the true value with probability p .
- (ii) The number of claims follows a Poisson distribution.

The standard is changed so that the total cost of claims is to be within 5% of the true value with probability p , where claim severity has probability density function:

$$f(x) = \frac{1}{10,000}, \quad 0 \leq x \leq 10,000$$

Using limited fluctuation credibility, determine the expected number of claims necessary to obtain full credibility under the new standard.

- (A) 720
- (B) 960
- (C) 2160
- (D) 2667
- (E) 2880