

2.

You are given:

- (i) The number of claims has a Poisson distribution.
- (ii) Claim sizes have a Pareto distribution with parameters $\theta = 0.5$ and $\alpha = 6$.
- (iii) The number of claims and claim sizes are independent.
- (iv) The observed pure premium should be within 2% of the expected pure premium 90% of the time.

Determine the expected number of claims needed for full credibility.

- (A) Less than 7,000
- (B) At least 7,000, but less than 10,000
- (C) At least 10,000, but less than 13,000
- (D) At least 13,000, but less than 16,000
- (E) At least 16,000