

75. You are given:

- (i) Claim amounts follow a shifted exponential distribution with probability density function:

$$f(x) = \frac{1}{\theta} e^{-(x-\delta)/\theta}, \quad \delta < x < \infty$$

- (ii) A random sample of claim amounts X_1, X_2, \dots, X_{10} :

5 5 5 6 8 9 11 12 16 23

- (iii) $\sum X_i = 100$ and $\sum X_i^2 = 1306$

Estimate δ using the method of moments.

- (A) 3.0
(B) 3.5
(C) 4.0
(D) 4.5
(E) 5.0