

64. For a group of insureds, you are given:

- (i) The amount of a claim is uniformly distributed but will not exceed a certain unknown limit θ .
- (ii) The prior distribution of θ is $\pi(\theta) = \frac{500}{\theta^2}$, $\theta > 500$.
- (iii) Two independent claims of 400 and 600 are observed.

Determine the probability that the next claim will exceed 550.

- (A) 0.19
- (B) 0.22
- (C) 0.25
- (D) 0.28
- (E) 0.31