

24. You are given:

- (i) The probability that an insured will have exactly one claim is θ .
- (ii) The prior distribution of θ has probability density function:

$$\pi(\theta) = \frac{3}{2}\sqrt{\theta}, \quad 0 < \theta < 1$$

A randomly chosen insured is observed to have exactly one claim.

Determine the posterior probability that θ is greater than 0.60.

- (A) 0.54
- (B) 0.58
- (C) 0.63
- (D) 0.67
- (E) 0.72