

40. An insurance policy pays for a random loss X subject to a deductible of C , where $0 < C < 1$. The loss amount is modeled as a continuous random variable with density function

$$f(x) = \begin{cases} 2x & \text{for } 0 < x < 1 \\ 0 & \text{otherwise.} \end{cases}$$

Given a random loss X , the probability that the insurance payment is less than 0.5 is equal to 0.64.

Calculate C .

- (A) 0.1
- (B) 0.3
- (C) 0.4
- (D) 0.6
- (E) 0.8