

54. An auto insurance company insures an automobile worth 15,000 for one year under a policy with a 1,000 deductible. During the policy year there is a 0.04 chance of partial damage to the car and a 0.02 chance of a total loss of the car. If there is partial damage to the car, the amount  $X$  of damage (in thousands) follows a distribution with density function

$$f(x) = \begin{cases} 0.5003 e^{-x/2} & \text{for } 0 < x < 15 \\ 0 & \text{otherwise.} \end{cases}$$

What is the expected claim payment?

- (A) 320
- (B) 328
- (C) 352
- (D) 380
- (E) 540