33. The loss due to a fire in a commercial building is modeled by a random variable X with density function

$$f(x) = \begin{cases} 0.005(20 - x) & \text{for } 0 < x < 20 \\ 0 & \text{otherwise.} \end{cases}$$

Given that a fire loss exceeds 8, what is the probability that it exceeds 16 ?

(A) $\frac{1}{25}$

(B) $\frac{1}{9}$

(C) $\frac{1}{8}$

(D) $\frac{1}{3}$

(E) $\frac{3}{7}$