

45. Let  $X$  be a continuous random variable with density function

$$f(x) = \begin{cases} \frac{|x|}{10} & \text{for } -2 \leq x \leq 4 \\ 0 & \text{otherwise.} \end{cases}$$

Calculate the expected value of  $X$ .

(A)  $\frac{1}{5}$

(B)  $\frac{3}{5}$

(C) 1

(D)  $\frac{28}{15}$

(E)  $\frac{12}{5}$