

35. The lifetime of a machine part has a continuous distribution on the interval $(0, 40)$ with probability density function f , where $f(x)$ is proportional to $(10 + x)^{-2}$.

What is the probability that the lifetime of the machine part is less than 5?

- (A) 0.03
- (B) 0.13
- (C) 0.42
- (D) 0.58
- (E) 0.97