

Question

If $\{a_n\}_{n=1}^{\infty}$ is a sequence with $\lim_{n\to\infty} \frac{a_n}{n} = 0$, then which of the following must be true? (There may be more than one correct answer.)

A.
$$\lim_{n \to \infty} \frac{a_n}{e^n} = 0$$
 B. $\lim_{n \to \infty} \frac{a_n}{n!} = 0$

C.
$$\lim_{n \to \infty} \frac{a_n}{\sqrt{n}} = 0$$
 D. $\lim_{n \to \infty} \frac{a_n}{\ln(n)} = 0$

$$\mathsf{E.} \quad \lim_{n \to \infty} a_n = 0$$