## Sequences



## Question

Given that  $\lim_{n\to\infty} |a_n| = 3$ , which of the following statements must be false?

- A.  $\lim_{n\to\infty} a_n = 3$
- B.  $\lim_{n\to\infty} a_n$  diverges due to oscillation.
- C.  $\lim_{n\to\infty} a_n$  diverges to  $\infty$ .
- D.  $\lim_{n\to\infty} \frac{a_n}{n}$  converges.