

Comparison Test



Question

Consider the series $\sum_{n=1}^{\infty} a_n$ where $a_n = \frac{2 + (-1)^n}{1 + n^3}$. Which of the following series $\sum_{n=1}^{\infty} b_n$ has $a_n \leq b_n$ for all $n \geq 1$?

A. $\sum_{n=1}^{\infty} \frac{3}{n}$

B. $\sum_{n=1}^{\infty} \frac{3}{n^3}$

C. $\sum_{n=1}^{\infty} \frac{3}{1 + n^3}$

D. $\sum_{n=1}^{\infty} \frac{2}{1 + n^3}$

E. More than one of the above

F. All of A through D