



Question

If $a_1 + a_2 + a_3 + \cdots$ and $b_1 + b_2 + b_3 + \cdots$ are convergent series of numbers and c is a real number, which of the following identities is always true?

(There may be more than one correct answer.)

- A. $c(a_1 + a_2 + a_3 + \cdots) = (ca_1 + ca_2 + ca_3 + \cdots)$
- B. $(a_1 + a_2 + a_3 + \cdots) + (b_1 + b_2 + b_3 + \cdots) = (a_1 + b_1 + a_2 + b_2 + a_3 + b_3 + \cdots)$
- C. $(a_1 + a_2 + a_3 + \cdots)(b_1 + b_2 + b_3 + \cdots) = (a_1b_1 + a_2b_2 + a_3b_3 + \cdots)$
- D. $(a_1 + a_2 + a_3 + \cdots)^2 = (a_1^2 + a_2^2 + a_3^2 + \cdots)$