Binomial Theorem - Class XI

Past Year JEE Questions

Questions

Quetion: 01

Let $(x + 10)^{50} + (x - 10)^{50} = a_0 + a_1x + a_2x^2 + \ldots + a_{50}x^{50}$, for all $x \in R$; then $\frac{a_2}{a_0}$ is equal to

A. 12.25
B. 12.75
C. 12.00
D. 12.50

Solutions

Solution: 01

Explanation

$(10 + x)^{50} + (10 - x)^{50}$

$\Rightarrow a_2 = 2 \cdot {}^{50}C_2 \, 10^{48}, \ a_0 = 2 \cdot 10^{50}$

$\frac{a_2}{a_0} = \frac{{}^{50}C_2}{10^2} = 12.25$