

Binomial Theorem - Class XI

Past Year JEE Questions

Questions

Question: 01

If the co-efficient of x^7 and x^8 in the expansion of $(2 + \frac{x}{3})^n$ are equal, then the value of n is equal to _____.

Solutions

Solution: 01

Answer

Correct Answer is **55**

Explanation

$${}^nC_7 2^{n-7} \frac{1}{3^7} = {}^nC_8 2^{n-8} \frac{1}{3^8}$$

$$\Rightarrow n - 7 = 48 \Rightarrow n = 55$$