MATHS

BOOKS - JEE MAINS PREVIOUS YEAR ENGLISH

BINOMIAL THEOREM

Others

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1. In the binomial expansion of $(a - b)^n, n \geq 5,$ the sum of 5th and 6th terms is zero, then $\dfrac{a}{b}$ equals (1) $\dfrac{5}{n-4}$ (2) $\dfrac{6}{n-5}$ (3) $\dfrac{n-5}{6}$ (4) $\dfrac{n-4}{5}$

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2. The sum of the series $^{20}C_0 - {}^{20}C_1 + {}^{20}C_2 - {}^{20}C_3 + ... - ... + {}^{20}C_{10}$ is:

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3. In a binomial distribution $B\left(n, p = \dfrac{1}{4}\right)$, if the probability of at least one success is greater than or equal to $\dfrac{9}{10}$, then n is greater than (1)

$$\dfrac{1}{(\log)_{10}^{4} - (\log)_{10}^{3}} \quad (2) \quad \dfrac{1}{(\log)_{10}^{4} + (\log)_{10}^{3}} \quad (3) \quad \dfrac{9}{(\log)_{10}^{4} - (\log)_{10}^{3}} \quad (4)$$

$$\dfrac{4}{(\log)_{10}^{4} - (\log)_{10}^{3}}$$

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4. The reamainder left out when $8^{2n} - (62)^{2n+1}$ is divided by 9 is

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5. The term independent of x in expansion of

$$\left(\dfrac{x+1}{x^{\frac{2}{3}} - x^{\frac{1}{3}} + 1} - \dfrac{x-1}{x - x^{\frac{1}{2}}}\right)^{10}$$ is (1) 120 (2) 210 (3) 310 (4) 4

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6. The sum of coefficients of integral powers of x in the binomial expansion of $\left(1 - 2\sqrt{x}\right)^{50}$ is: (1) $\frac{1}{2}\left(3^{50} + 1\right)$ (2) $\frac{1}{2}\left(3^{50}\right)$ (3) $\frac{1}{2}\left(3^{50} - 1\right)$ (4) $\frac{1}{2}\left(2^{50} + 1\right)$

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7. The value of

$$\left(.^{21}C_1 - .^{10}C_1\right) + \left(.^{21}C_2 - .^{10}C_2\right) + \left(.^{21}C_3 - .^{10}C_3\right) + \left(.^{21}C_4 - .^{10}C_4\right)$$

is

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