Class 11 Mathematics · Chapter 7: Binomial Theorem

Worksheet · 20 marks · about 40 minutes · based on NCERT

Name _____ Class and section _____ Date _____

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1. The number of terms in the expansion of $(3x - 5y)^9$ is [1]

(a) 9 (b) 10
(c) 18 (d) 8

2. The value of ${}^{10}C_0 - {}^{10}C_1 + {}^{10}C_2 - {}^{10}C_3 + \ldots + {}^{10}C_{10}$ is [1]

(a) 0 (b) 1
(c) 1024 (d) −1

3. The binomial coefficient of the third term in the expansion of $(a + b)^{10}$ is [1]

(a) 120 (b) 10
(c) 45 (d) 90

4. The fourth term of $(y + 3)^5$ is $k\,y^2$. The value of k is [1]

(a) 90 (b) 405
(c) 135 (d) 270

5. The row of Pascal's triangle for index 6 is 1 6 15 20 15 6 1. The fourth entry of the row for index 7 is [1]

(a) 21 (b) 70
(c) 35 (d) 30

6. Find the sum of all the coefficients in the expansion of $(3x - 2y)^5$. [2]

7. Find the 5th term in the expansion of $(3 + \frac{x}{2})^6$. [2]

8. The row of Pascal's triangle for index 5 is 1 5 10 10 5 1. Write the row for index 6, and use it to find the coefficient of a^2b^4 in $(a - b)^6$. [2]

9. Writing $(1 + x + x^2)^4$ as $[(1 + x) + x^2]^4$, find the coefficient of x^3 in its expansion. [3]

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10. Find the term independent of x in the expansion of $(3x - \frac{1}{6x^2})^9$. [3]

11. For the expansion of $(x + 2y)^9$, find (a) the number of terms, (b) which term contains y^4, (c) that term. [3]

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