

Section 02-02 Sample Quiz - Binomial Theorem**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. Expand the following using the Binomial Theorem or Pascal's Triangle:

$$(4x - 2y)^3$$

a. $64x^3 - 96x^2y + 48xy^2 - 8y^3$

c. $64x^3 + 96x^2y + 48xy^2 + 8y^3$

b. $64x^3 - 8y^3$

d. $64x^3 + 8y^3$

- _____ 2. Which of the below sequence of numbers would represent the **6th row of Pascal's Triangle** or alternately a list of each of the coefficients of $(a + b)^6$ when it is expanded?

a. 1 6 10 10 6 1

c. 1 6 35 35 6 1

b. 1 6 21 35 21 6 1

d. 1 6 15 20 15 6 1

- _____ 3. Find the **6th** term of the expansion $(2x + 1)^7$

a. $448x^6$

c. $84x^5$

b. $448x^5$

d. $84x^2$

- _____ 4. Find the coefficient of the **third term** in the expansion of $(2x + y)^5$.

a. 2

c. 40

b. 10

d. 80

- _____ 5. If the binomial expression $(3x + 2y)^8$ were to be expanded, which term of the expansion could be determined by the expression: $({}_8C_5) \cdot (3x)^3 \cdot (2y)^5$

a. The 2nd term of the expansion

c. The 5th term of the expansion

b. The 3rd term of the expansion

d. The 6th term of the expansion