Content, Coefficient and Powers

A. Choose the correct answer:

- 1. In the term 7xy², the numerical coefficient is
 - a) 7 b) x
 - c) y² d) xy

2. In the term –5a²b, the power of a is

- a) 2 b) -5
- c) 1 d) 0
- 3. The constant term in the expression $3x^2 + 2x 9$ is
 - a) 3 b) 2
 - c) –9 d) x
- 4. Which of the following is a term with a coefficient of -4 and a power of 3 on x?
 - a) -4xb) $-4x^3$ c) $x^3 - 4$ d) $-x^3 + 4$
- 5. In the expression $4x^2y 3xy + 7$, how many variable terms are there?
 - a) 1 b) 2
 - c) 3 d) 4

B. Write the Missing Terms to Complete the Sentences:

- 1. In the term 6a²b, the coefficient is ______.
- 2. The power of x in the term $2x^3y$ is _____.
- 3. A term without any variable is called a ______.
- 4. The coefficient of –x is _____.
- 5. In 5m²n, the power of m is ______.

C. Mark each sentence with a True (\checkmark) or False (X):

- 1. The coefficient of x in the term –x is –1.
- 2. In the term 3a²b, the power of b is 2.

- 3. A constant term has no variable.
- 4. In the term 5x, the power of x is 0.
- 5. The coefficient in $-2y^2$ is -2.

D. Figure out the answers to these questions:

- 1. Identify the coefficient and powers of each variable in the term $-3x^2y^3$.
- 2. Write the variables, their powers, and coefficient in the term 8a²b.
- 3. Create a term with coefficient –6 and powers 2 on m and 1 on n.
- 4. Write any three terms and identify which one has the highest power of x?
- 5. From the expression $7x^2 4x + 9$, classify terms as variable terms and constant.

E. Challenge yourself with these questions:

- 1. Write a term with coefficient 10 and variables p and q such that the power of p is 2 and q is 3.
- 2. Create a short expression using 3 terms and identify the coefficients and powers in each.
- 3. Form a term that has coefficient –7 and contains variable x raised to power 4.
- 4. Given the term 9mn², change the power of n to 3 and rewrite the term.
- 5. From the expression $x^3 + 5x^2 2x + 4$, list all terms with their coefficients and powers.