

## Algebraic Expression

### A. Choose the correct answer:

1. Which of the following is a binomial?

- a)  $5x + 7$
- b)  $2xy + 3xz + yz$
- c)  $x^3$
- d) 7

2. In the expression  $4a^2b - 5ab^2 + 6b$ , the number of terms is:

- a) 1
- b) 2
- c) 3
- d) 4

3. The coefficient of  $x$  in the expression  $7x - 3y + 4$  is:

- a)  $-3$
- b) 4
- c) 7
- d) 0

4. Which of the following is a like term to  $5a^2b$ ?

- a)  $3ab^2$
- b)  $-2a^2b$
- c)  $4ab$
- d)  $7a^3b$

5. If  $x = 2$  and  $y = 3$ , the value of the expression  $x^2 + y^2$  is:

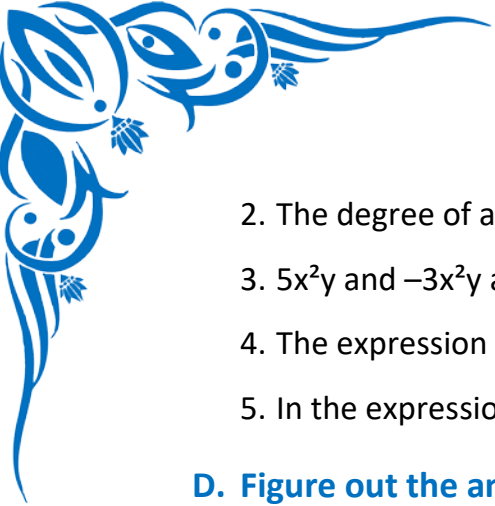
- a) 13
- b) 12
- c) 14
- d) 15

### B. Write the Missing Terms to Complete the Sentences:

1. An expression containing only one term is called a \_\_\_\_\_.
2. The degree of the expression  $3x^2y^3$  is \_\_\_\_\_.
3. Terms having the same variables with the same powers are called \_\_\_\_\_ terms.
4. In the expression  $2a + 3b - 7$ , the constant term is \_\_\_\_\_.
5. The sum of  $5x$  and  $-3x$  is \_\_\_\_\_.

### C. Mark each sentence with a True (✓) or False (X):

1. An algebraic expression must contain at least one variable. \_\_\_\_\_



2. The degree of a constant term is always 1. \_\_\_\_\_
3.  $5x^2y$  and  $-3x^2y$  are like terms. \_\_\_\_\_
4. The expression  $x + y + z$  is a monomial. \_\_\_\_\_
5. In the expression  $4p - 5q + 6$ , the constant term is 6. \_\_\_\_\_

**D. Figure out the answers to these questions:**

1. Identify the terms, coefficients, and variables in the expression  $4xy - 7y + 5$ .
2. Add:  $(2x + 3y - 5)$  and  $(3x - 2y + 7)$ .
3. Subtract  $(5a - 3b + 2)$  from  $(7a + 2b - 4)$ .
4. Simplify:  $3(x + 4) - 2(x - 5)$ .
5. Multiply:  $(2x - 3)(x + 5)$ .

**E. Challenge yourself with these questions:**

1. Find the sum of  $2x^2 - 5x + 3$  and  $-x^2 + 4x - 7$ .
2. Write an algebraic expression for: The sum of a number and 9 is divided by 2.
3. Factorize:  $x^2 + 7x + 12$ .
4. Expand:  $(x + 2)(x + 5)$ .
5. Simplify:  $\left(\frac{3}{2}\right)x - \left(\frac{5}{3}\right)x + \left(\frac{7}{6}\right)x$ .