

## Algebraic Expressions Worksheet – 3

1. What kind of algebraic expression is  $p^3 + q^3 + r^3 + 3pqr$ ?

2. Write all the terms of the following algebraic expression.

$$3x^2 + 2y^2 - 5xy + 6$$

3. Identify the terms of the following algebraic expression.

$$2.2pq - 3.2q + 4.8p$$

4. Which pair of terms are like terms?

a)  $25x, -25y$

b)  $4a^2b, -6ba^2$

c)  $4a^2bc, -6b^2ac$

d)  $5p^2, 5q^2$

5.  $5x^2 - 5 + 6x + 2$  is a trinomial, mark true / False.

a) True

b) False

6. Write the degree of below mentioned polynomial.

$$5 - 2a^2 - 4ab^3 + 7b^5$$

7. Simplify below mentioned algebraic expression.

$$5b^2 + 7b - 3 - (9b - b^2 - 7)$$

8. Find the sum of below mentioned algebraic expressions.

$$5a^2 + 7a - 4, 5a + 4 - a^2, 5 - 3a$$

9. Simplify the following algebraic expression.

$$5p^2q - 3pq^2 + 8pq - 8p^2q - 5pq + 7pq^2$$

10. Subtract  $5xy + 6x^2 - 8y^2$  from  $9x^2 - 10xy - 5y^2 + 4$ .

11. From the sum of  $5a + 2$  and  $5a^2 + 7a - 4$  subtract the sum of  $3a^2 - 5a$  and  $4a - 5a^2 + 7$ .

12. What should be deducted from  $3p^2 - 5q^2 + 8pq + 25$  to get  $p^2 + 4q^2 + 6pq + 20$ .

13. If  $a = 4, b = -3$ , then find the value of  $a^3 + b^3 + 3qb$ .

14. If  $p = 4$ , then find the value of  $3(2p - 1) + 2p + 15$ .

15. If  $a = -3, b = -4$ , then find the value of  $3(a^2 + ab) + 3 - 2ab$ .

16. When  $a = 2, b = -1, c = -2$ , then find the values of  $a^3 + b^3 + c^3 + 3abc$ .

17. Write the degree of following polynomials.

$$\frac{3}{5}ab^2 + 4ab + \frac{2}{3}a^2b^2 + 5b$$

18. How much is  $5a^2 - 7ab + 4b^2 + 6$  greater than  $3a^2 + 2ab + 4$ ?

19. What must be added  $5p^3 - 3p^2 + 4p + 3$  to get  $8p^3 + 6p - 7$ ?

20. Simplify:  $75 - [12y - 5(3y - 2) - 2\{12y - 2(2 - 4y)\}]$