

# Assignments for Algebraic Expressions and Identities Exercise 1

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## Question 1

Identify the terms, their coefficients for each of the following expressions.

(i)  $xyz^2 + 3xy$

(ii)  $1 - x - 2x^2$

(iii)  $4p^2q^2 - 4p^2q^2r^2 + r^2$

(iv)  $4 - xy + yz - xz$

(v)  $(x/4) - (y/5) - y$

(vi)  $1.3a - 2.6ab + 1.5b$

## Question 2

Classify the following polynomials as monomials, binomials, trinomials. Which polynomials do not fit in any of these three categories?

$$x^2 + y^2$$

$$1000 - x$$

$$x + x^2 + x^3 + x^4 + x^5$$

$$8 - y + 5x$$

$$2y - 3y^2$$

$$2y - 3y + 4y^3$$

$$5x - 8y + 3xy$$

$$4 - 15z^2$$

$$ab + bc + cd + da + 2ab$$

$$pqr + 2pq + 5pqr$$

$$p^2q + pq^2$$

$$2p + 2q + 1$$

### Question 3

Add the following.

(i)  $ab - bc + ac, bc - ca + ab, ca - ab - 2bc$

(ii)  $p - q + pq, q - r + qr, r - p + pr, p + q + r$

(iii)  $2p^2q^2 - 3pq + 4, 5 + 7pq - 3p^2q^2, 4p^2q^2 + 10pq$

(iv)  $a^2 + b^2, b^2 + c^2, c^2 + a^2, 2ab + 2bc + 2ac$

### Question 4.

(a) Subtract  $8a - 7ab + 3b - 20$  from  $20a - 9ab + 5b - 20$

(b) Subtract  $3pq + 5qr - 7pr + 1$  from  $-4pq + 2qr - 2pr + 5pqr + 1$

(c) Subtract  $4p^2q - 4pq - 5pq^2 - 8p + 7q - 18$

from  $18 - 3p - 11q + 5pq - 2pq^2 + 5p^2q$

### Question 5

What are the coefficient of each term in the below expression?

$$4p^2q^2 + 4p^2q^2r^2 - r^2 + 5$$

- a) 4,4,-1,5
- b) 4,4,1,5
- c)  $4,4r^2, -r^2, 5$
- d) None of these

### Question 6

The product of a monomial and trinomial will be a

- a) monomial
- b) trinomial
- c) binomial
- d) None of these

### Question 7

The exponents of a variable term in the polynomial is a

- a) integers
- b) negative integers
- c) positive integers
- d) non -negative integers

### Question 8

The expression  $pqr + rqp + qpr$  is a

- a) Monomial
- b) trinomial

c) binomial

d) none of these

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