Exercise 8B

(iii) $\mathbf{p-q-r}$

Substituting p = -2, q = -1 and r = 3 in the given expression:

$(-2)-(-1)-(3)=-2+1-3$

$=-4$

(iv) $\mathbf{p^3+q^3+r^3+3pqr}$

Substituting p = -2, q = -1 and r = 3 in the given expression:

$(-2)^3+(-1)^3+(3)^3+3\times(-2\times-1\times3)$

$=(-2\times-2\times-2)+(-1\times-1\times-1)+(3\times3\times3)+3\times(6)$

$=(-8)+(-1)+(27)+18$

$=36$

(v) $\mathbf{3p^2q+5pq^2+2pqr}$

Substituting p = -2, q = -1 and r = 3 in the given expression:

$3\times(-2)^2\times(-1)+5\times(-2)\times(-1)^2+2\times(-2\times-1\times3)$

$=3\times(-2\times-2)\times(-1)+5\times(-2)\times(-1\times-1)+2\times(-2\times-1\times3)$

$=-12-10+12$

$=-10$

(vi) $\mathbf{p^4+q^4-r^4}$

Substituting p = -2, q = -1 and r = 3 in the given expression:

$(-2)^4+(-1)^4-(3)^4$

$=(-2\times-2\times-2\times-2)+(-1\times-1\times-1\times-1)-(3\times3\times3\times3)$

$=16+1-81$

$=-64$

Q4

Answer :

(i) Coefficient of x in 13x is 13.
(ii) Coefficient of y in -5y is -5.
(iii) Coefficient of a in 6ab is 6b.
(iv) Coefficient of z in -7xz is -7x.
(v) Coefficient of p in -2pqr is -2qr.
(vi) Coefficient of y^2 in $8xy^2z$ is 8xz.
(vii) Coefficient of x^3 in x^3 is 1.
(viii) Coefficient of x^2 in $-x^2$ is -1.

Q5

Answer :

(i) Numerical coefficient of ab is 1.
(ii) Numerical coefficient of -6bc is -6.
(iii) Numerical coefficient of 7xyz is 7.
(iv) Numerical coefficient of $-2x^3y^2z$ is -2.

Q6

Answer :

A term of expression having no literal factors is called a constant term.
(i) In the expression $3x^2 + 5x + 8$, the constant term is 8.
(ii) In the expression $2x^2 - 9$, the constant term is -9.
(iii) In the expression $4y^2 - 5y + \frac{3}{5}$, the constant term is $\frac{3}{5}$.
(iv) In the expression $z^3 - 2z^2 + z - \frac{8}{3}$, the constant term is $-\frac{8}{3}$.

Q7

Answer :

The expressions given in (i), (iii), (vi) and (viii) contain only one term. So, each one of them is monomial.
The expressions given in (ii) and (ix) contain two terms. So, both of them are binomial.
The expressions given in (iv) and (v) contain three terms. So, both of them are trinomial.
The expression given in (vii) contains four terms. So, it does not represents any of the given types.

Q8

Answer :

(i) Expression $4x^5 - 6y^4 + 7x^2y - 9$ has four terms, namely $4x^5$, $-6y^4$, $7x^2y$ and -9.
(ii) Expression $9x^3 - 5z^4 + 7z^3 y - xyz$ has four terms, namely $9x^3$, $-5z^4$, $7z^3 y$ and -xyz.

Q9

Answer :

The terms that have same literals are called like terms.
(i) a^2 and $2a^2$ are like terms.
(ii) $-yz$ and $\frac{1}{2}zy$ are like terms.
(iii) $-2xy^2$ and $5y^2x$ are like terms.
(iv) ab^2c, acb^2, b^2ac and cab^2 are like terms.

********** END **********