Algebraic Expressions Ex 7.1 Q7

Answer :

The coefficients are as follows.

(i) The coefficient of y is -3.

(ii) The coefficient of a is 2b.

(iii) The coefficient of z is -7xy.

(iv) The coefficient of p is -3qr.

(v) The coefficient of y^2 is 9xz.

(vi) The coefficient of x^3 is 1.

(vii) The coefficient of $-x^2$ is - 1.

Algebraic Expressions Ex 7.1 Q8

Answer :

The numerical coefficient of each of the given terms is as follows.

(i) The numerical coefficient in the term xy is 1.

(ii) The numerical coefficient in the term -6yz is - 6.

(iii) The numerical coefficient in the term 7abc is 7.

(iv) The numerical coefficient in the term $-2x^3y^2z$ is - 2.

Algebraic Expressions Ex 7.1 Q9

Answer :

The numerical coefficient of each term in the given algebraic expressions is as follows.

	Term	Coefficient
(i)	$4x^2y$	4
	$-\frac{3}{2}xy$	$-\frac{3}{2}$
	$\frac{5}{2}xy^2$	$\frac{5}{2}$
(ii)	$-\frac{5}{3}x^2y$	$-\frac{5}{3}$
	$\frac{7}{4}xyz$	$\frac{7}{4}$
	3	3

Algebraic Expressions Ex 7.1 Q10

Answer :

The constant term of each of the given algebraic expressions is as follows.

(i) The constant term in the given algebraic expression is -3.

(ii) The constant term in the given algebraic expression is 5.

Algebraic Expressions Ex 7.1 Q11

Answer :

We have x = −2, y = −1 and z = 3.

Thus,

(i)

$$\frac{x}{y}+\frac{y}{z}+\frac{z}{x}$$

$$=\left(\frac{-2}{-1}\right)+\left(\frac{-1}{3}\right)+\left(\frac{3}{-2}\right)$$

$$=2-\frac{1}{3}-\frac{3}{2}$$

$$=\frac{12-2-9}{6}=\frac{12-11}{6}=\frac{1}{6}$$

(ii) $x^2 + y^2 + z^2 - xy - yz - zx$

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

$= 4 + 1 + 9 - 2 + 3 + 6$

$= (4 + 1 + 9 + 3 + 6) - 2$

$= 23 - 2 = 21$

Algebraic Expressions Ex 7.1 Q12

Answer :

We have x = 1, y = −1, z = 2, a = −2, b = 1 and c = −2.

Thus,

(i) ax + by + cz

= (-2)(1) + (1)(-1) + (-2)(2)

= - 2 + (- 1) + (- 4)

= - 2 -1 - 4 = -7

(ii) $ax^2 + by^2 - cz^2$

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

= -2 x 1 + 1 - (-2 x 4)

= -2 + 1 - (-8)

= -2 + 1 + 8

= -2 + 9

= 7

(iii) axy + byz + cxy

= (-2)(1)(-1) + (1)(-1)(2) + (-2)(1)(-1)

= 2 + (-2) + 2

= 2 - 2 + 2

= 4 - 2

= 2

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