



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)

$$\begin{aligned} & \frac{x}{y} + \frac{y}{z} + \frac{z}{x} \\ &= \left(\frac{-2}{-1} \right) + \left(\frac{-1}{3} \right) + \left(\frac{3}{-2} \right) \\ &= 2 - \frac{1}{3} - \frac{3}{2} \\ &= \frac{12-2-9}{6} = \frac{12-11}{6} = \frac{1}{6} \end{aligned}$$

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

$$\begin{aligned} &= (-2)^2 + (-1)^2 + (3)^2 - (-2)(-1) - (-1)(3) - (3)(-2) \\ &= 4 + 1 + 9 - 2 + 3 + 6 \\ &= (4 + 1 + 9 + 3 + 6) - 2 \\ &= 23 - 2 = 21 \end{aligned}$$

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

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

$$= -2 \times 1 + 1 - (-2 \times 4)$$

$$= -2 + 1 - (-8)$$

$$= -2 + 1 + 8$$

$$= -2 + 9$$

$$= 7$$

(iii) $axy + byz + cxy$

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

$$= 2 + (-2) + 2$$

$$= 2 - 2 + 2$$

$$= 4 - 2$$

$$= 2$$

***** END *****