

CHAPTER – 10 Algebraic Expressions | CLASS 7TH

MATHS IMPORTANT QUESTIONS

Important Questions

Question 1.

Identify in the given expressions, terms which are not constants. Give their numerical coefficients.

(i) $5x - 3$

(ii) $11 - 2y^2$

(iii) $2x - 1$

(iv) $4x^2y + 3xy^2 - 5$

Solution:

Expression	Term which is not a constant	Numerical coefficient
(i) $5x - 3$	$5x$	5
(ii) $11 - 2y^2$	$-2y^2$	-2
(iii) $2x - 1$	$2x$	2
(iv) $4x^2y + 3xy^2 - 5$	$4x^2y$ $3xy^2$	4 3

Question 2.

Group the like terms together from the following expressions:

$-8x^2y, 3x, 4y, -32x, 2x^2y, -y$

Solution:

Group of like terms are:

(i) $-8x^2y, 2x^2y$

(ii) $3x, -32x$

(iii) $4y, -y$

Question 3.

Identify the pairs of like and unlike terms:

(i) $-32x, y$

(ii) $-x, 3x$

(iii) $-12y2x, 32xy^2$

(iv) $1000, -2$

Solution:

(i) $-32x, y \rightarrow$ Unlike Terms

(ii) $-x, 3x \rightarrow$ Like Terms

(iii) $-12y2x, 32xy^2 \rightarrow$ Like Terms

(iv) $1000, -2 \rightarrow$ Like Terms

Question 4.

Classify the following into monomials, binomial and trinomials.

(i) -6

(ii) $-5 + x$

(iii) $32x - y$

(iv) $6x^2 + 5x - 3$

(v) $z^2 + 2$

Solution:

(i) -6 is monomial

(ii) $-5 + x$ is binomial

(iii) $32x - y$ is binomial

(iv) $6x^2 + 5x - 3$ is trinomial

(v) $z^2 + z$ is binomial

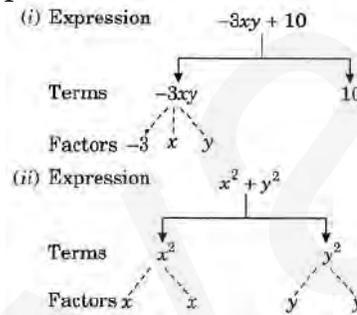
Question 5.

Draw the tree diagram for the given expressions:

(i) $-3xy + 10$

(ii) $x^2 + y^2$

Solution:



Question 6.

Identify the constant terms in the following expressions:

(i) $-3 + 32x$

(ii) $32 - 5y + y^2$

(iii) $3x^2 + 2y - 1$

Solution:

(i) Constant term = -3

(ii) Constant term = 32

(iii) Constant term = -1

Question 7.

Add:

(i) $3x^2y, -5x^2y, -x^2y$

(ii) $a + b - 3, b + 2a - 1$

Solution:

(i) $3x^2y, -5x^2y, -x^2y$

$$= 3x^2y + (-5x^2y) + (-x^2y)$$

$$= 3x^2y - 5x^2y - x^2y$$

$$= (3 - 5 - 1)x^2y$$

$$= -3x^2y$$

(ii) $a + b - 3, b + 2a - 1$

$$\begin{aligned} &= (a + b - 3) + (b + 2a - 1) \\ &= a + b - 3 + b + 2a - 1 \\ &= a + 2a + b + b - 3 - 1 \\ &= 3a + 2b - 4 \end{aligned}$$

Question 8.

Subtract $3x^2 - x$ from $5x - x^2$.

Solution:

$$\begin{aligned} &(5x - x^2) - (3x^2 - x) \\ &= 5x - x^2 - 3x^2 + x \\ &= 5x + x - x^2 - 3x^2 \\ &= 6x - 4x^2 \end{aligned}$$

Question 9.

Simplify combining the like terms:

(i) $a - (a - b) - b - (b - a)$

(ii) $x^2 - 3x + y^2 - x - 2y^2$

Solution:

(i) $a - (a - b) - b - (b - a)$

$$= a - a + b - b - b + a$$

$$= (a - a + a) + (b - b - b)$$

$$= a - b$$

(ii) $x^2 - 3x + y^2 - x - 2y^2$

$$= x^2 + y^2 - 2y^2 - 3x - x$$

$$= x^2 - y^2 - 4x$$