ICSE Class 8 Maths Selina Solutions Chapter 11: Students get great assistance from the ICSE Class 8 Selina Solutions, particularly when it comes to getting ready for the yearly examinations. Students frequently struggle to find solutions to the exercise's issues. They therefore require some reliable sources from which they can view and comprehend the solutions. We have supplied the ICSE Class 8 Maths Selina Solutions to assist pupils with this.

The topic of algebraic expressions is covered in ICSE Class 8 Maths Chapter 11. This chapter will teach students how to add and subtract polynomials, discover a polynomial's coefficients and degree, and solve a few related word problems. Here, you can find the detailed answers to all of the ICSE Class 8 Maths Selina Solutions Chapter 11 Algebraic Expressions problems in PDF format. After reading it through, pupils may comprehend the solution with ease.

ICSE Class 8 Maths Selina Solutions Chapter 11 Overview

The Selina Solutions for ICSE Class 8 Maths Chapter 11 on Algebraic Expressions provide a structured and comprehensive approach to mastering fundamental algebraic concepts. Designed to align with the ICSE curriculum, this chapter covers topics such as simplification of algebraic expressions, addition, subtraction, multiplication, and division of algebraic expressions, and the application of algebraic identities.

Each topic is explored through step-by-step solutions to exercises that reinforce understanding and problem-solving skills. By using these solutions, students can effectively consolidate their knowledge, build confidence in handling algebraic problems, and prepare thoroughly for exams. The solutions not only clarify concepts but also offer additional practice and insights, making them a valuable resource for both classroom learning and self-study.

ICSE Class 8 Maths Selina Solutions Chapter 11

Here we have provided ICSE Class 8 Maths Selina Solutions Chapter 11 for the ease of students so that they can prepare better for their upcoming exams -

ICSE Class 8 Maths Selina Solutions Chapter 11 Exercise 11A

Question 1. Separate the constants and variables from the following:

$-7, 7+x, 7x+yz, \sqrt{5}, \sqrt{xy}, \frac{3yz}{8}, 4.5y-3x\ 8-5, 8-5x, 8x-5y \times p$ and $3y^2z \div 4x$

Solution:-

Clearly constants are: $-7, \sqrt{5}, 8-5$

Variable are: $7+x, 7x+yz, \sqrt{xy}, \frac{3yz}{8}, 4.5y-3x, 8-5x, 8x-5y \times p$ and $3y^2z \div 4x$

Question 2.

Write the number of terms in each of the following polynomials.

(i) $5x^2 + 3 \times ax$

(ii) $ax \div 4 - 7$

(iii) $ax - by + y \times z$

(iv) $23 + a \times b \div 2$

Solution:-

(i) $5x^2 + 3xax$

$5x^2 + 3 \times ax = 5x^2 + 3ax$

∴ The number of terms in this Polynomial =2

(ii) $ax \div 4 - 7 = \frac{ax}{4} - 7$

∴ The number of terms in this polynomial =2

(iii) $ax - by + y \times z = ax - by + yz$

∴ The number of terms in this polynomial =3

(iv) $23 + a \times b \div 2 = 23 + \frac{ab}{2}$

∴ The number of terms in this polynomial =2

Question 3.

Separate monomials, binomials, trinomials and polynomials from the following algebraic expressions:

$8-3x, xy^2, 3y^2 - 5y + 8, 9x - 3x^2 + 15x^3 - 7$
$3x \times 5y, 3x \div 5y, 2y \div 7 + 3x - 7$ and $4 - ax^2 + bx + y$

Solution:-

Monomials are: $xy^2, 3x \times 5y, 3x \div 5y$

Binomials are: 8-3 x

Trinomials are: $3y^2 - 5y + 8, 2y \div 7 + 3x - 7$

Polynomials are: $8 - 3x, 3y^2 - 5y + 8, 9x - 3x^2 + 15x^3 - 7, 2y \div 7 + 3x - 7, 4 - ax^2 + bx + y$

Question 4.

Write the degree of each polynomial given below:

(i) x y+7 z

Solution:-

degree=2(Polynomial is xy+7z)

(ii) $x^2 - 6x^3 + 8y$

Solution:-

Degree=3(Polynomial is $x^2 - 6x^3 + 8y$)

(iii) $y - 6y^2 + 5y^8$

Solution:-

Degree= 8 (Polynomial is $y - 6y^2 + 5y^8$)

(iv) x y z-3

Solution:-

Degree=3 (Polynomial is xyz-3)

(v) $xy + yz^2 - zx^3$

Solution:-

Degree= 4 (Polynomial is $xy + yz^2 - xz^3$)

(vi) $x^5y^7 - 8x^3y^8 + 10x^4y^4z^4$

Degree= 12 (Polynomial is $x^5y^7 - 8x^3y^8 + 10x^4, y^4z^4$)

Question 5.

Write the coefficient of:

(i) ab in 7abx

Solution:-

The coefficient of ab in 7 a b x=7 x

(ii) 7a in 7abx

Solution:-

The coefficient of ab 7a in 7abx=bx

(iii) $5x^2 \text{ in } 5x^2 - 5x$

Solution:-

The coefficient of $5x^2 \text{ in } 5x^2 - 5x = 1$

(iv) $8 \text{ in } a^2 - 8ax + a$

Solution:-

The coefficient of 8 in $a^2 - 8ax + a = -ax$

(v) $4xy$ in $x^2 - 4xy + y^2$

Solution:-

The coefficient of $4xy$ in $x^2 - 4xy + y^2 = -1$

Question 6:

$\ln \frac{5}{7}xy^2z^3$. Write the coefficient of

(i) 5

Solution:-

5 is $\frac{1}{7}xy^2z^3$

(ii) $\frac{5}{7}$

Solution:-

$\frac{5}{7}$ is xy^2z^3

(iii) 5 x

$5x$ is $\frac{1}{7}y^2z^3$

(iv) xy^2

Solution:-

xy^2 is $\frac{5}{7}z^3$

(v) z^3

Solution:-

z^3 is $\frac{5}{7}xy^2$

(vi) xz^3

Solution:-

xz^3 is $\frac{5}{7}y^2$

(vii) $5xy^2$

Solution:-

$5xy^2$ is $\frac{1}{7}z^3$

(viii) $\frac{1}{7}yz$

Solution:-

$\frac{1}{7}yz\text{is}5xyz^2$

(ix) z

Solution:-

z is $\frac{5}{7}xy^2z^2$

(x) yz^2

Solution:-

yz^2 is $\frac{5}{7}xy - z$

(xi) 5 xyz

Solution:-

$5xyz$ is $\frac{1}{7}yz^2$

Question 7.

In each polynomial, given below, separate the like terms:

(i) $3xy, -4yx^2, 2xy^2, 2.5x^2y, -8yx, -3.2y^2x$ and x^2y

Solution:-

(i) Like terms are

$3xy, -8yx; -4yx^2, 2.5x^2y$ and $x^2y; 2xy^2$ and $-3.2y^2$

(ii) $y^2z^3, xy^2z^3, -5x^2yz, -4y^2z^3, -8xz^3y^2, 3x^2yz$ and $2z^3y^2$

Solution:-

$y^2z^3, -y^2z^3$ and $2z^3y^2; xy^2z^3$ and $-8xz^3y - 5x^2yz$ and $: x^2yz$

ICSE Class 8 Maths Selina Solutions Chapter 11 Exercise 11B

Question 1

Evaluate:

(i) $-7x^2 + 18x^2 + 3x^2 - 5x^2$

Solution:-

$= 21x^2 - 12x^2 = 9x^2$

(ii) $b^2y - 9b^2y + 2b^2y - 5b^2$

Solution:-

$= 3b^2y - 14b^2y = -11b^2y$

(iii) abx-15abx-10abx+32abx

Solution:-

=33abx-25abx

=8abx

(iv) 7x-9y+3-3x-5y+8

Solution:-

=7x-3x-9y-5y+3+8

=4x-14y+11

(v) $3x^2 + 5xy - 4y^2 + x^2 - 8xy - 5y^2$

Solution:-

$= 3x^2 + 5xy - 8xy - 4y^2 - 5y^2 = 3x^2 - 3xy - 9y^2$

Question 2

Add :

(i) 5a+3y . a-2b,3a+5b

Solution:-

$$\begin{array}{r} 5a + 3b \\ a - 2b \\ 3a + 5b \\ \hline 9a + 6b \\ \hline \end{array}$$

(ii)8x-3y+7z,-4x+5y-4z,-x-y-2z

Solution:

$$\begin{array}{r} 8x - 3y + 7z \\ -4x + 5y - 4z \\ -x - y - 2z \\ \hline 3x + y + z \\ \hline \end{array}$$

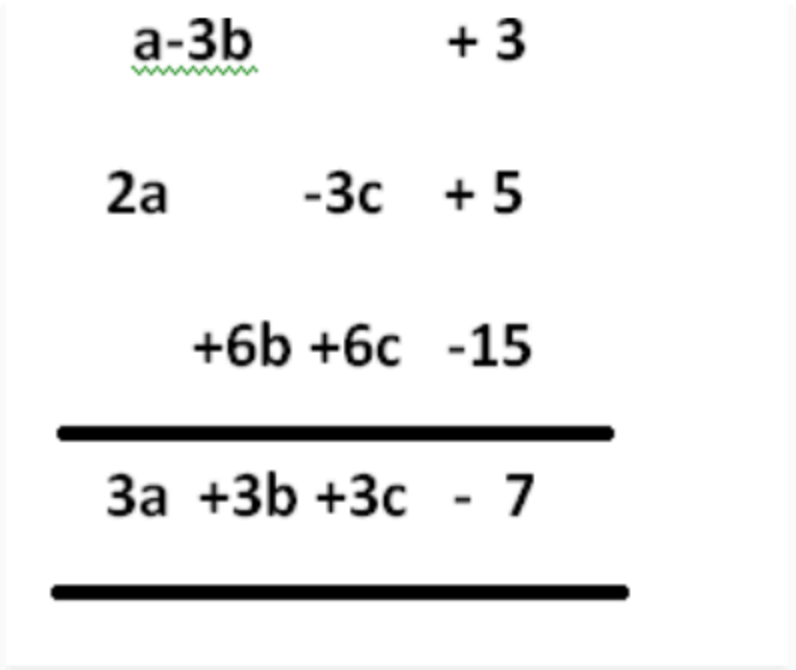
(iii)3b-7c+10,5c-2b-15,15+12c+b

Solution:-

$$\begin{array}{r} 3b - 7c + 10 \\ -2b + 5c - 15 \\ +b + 12c + 15 \\ \hline 2b + 10c + 10 \\ \hline \end{array}$$

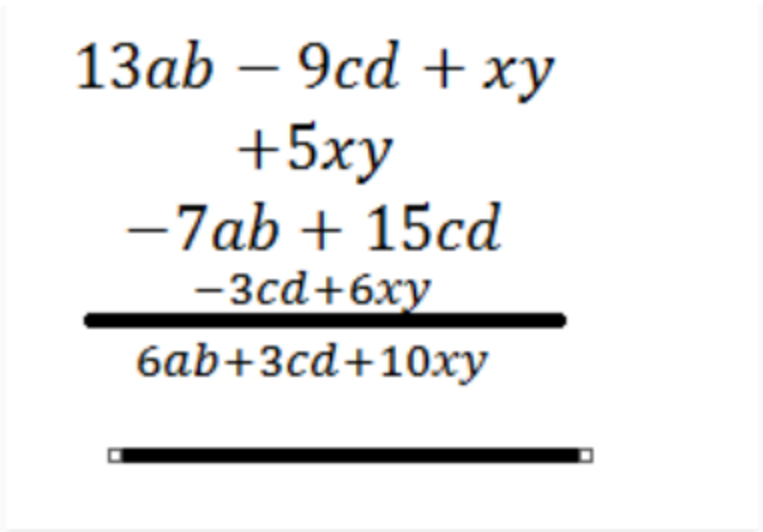
(iv) a-3b+3;2a+5-3c:6c-15+6b

Solution:-



(v)13ab-9cd-xy;5xy;15cd-7ab 6xy-3cd

Solution:



(vi) $x^3 - x^2y + 5xy^2 + y^3; -x^3 - 9xy^2 + y^3; 3x^2y + 9xy^2$

Solution:

$$
\begin{array}{r}
x^3 - x^2y + 5xy^2 + y^3 \\
-x^3 - 9xy^2 + y^3 \\
\hline
+3x^2y + 9xy^2 \\
\hline
2x^2y + 5xy^2 + 2y^3 \\
\hline
\end{array}
$$

(vii) $a^6 - 4a^4 + 6a$;
$5a^6 + 5a^4 + 6a$;
$12a^6 - 10a$

Solution:-

$$
\begin{array}{r}
a^6 - 4a^4 + 6a \\
5a^6 + 5a^4 + 6a \\
12a^6 - 10a \\
\hline
18a^6 + a^4 + 2a \\
\hline
\end{array}
$$

(viii) $2ax - 6by + 4cz$;
$4by - 14ax$;
$9cz - 4ax - 6by$

Solution:-

$$
\begin{array}{r}
2ax - 6by + 4cz \\
4by - 14ax \\
9cz - 4ax - 6by \\
\hline
-16ax - 8by + 13cz \\
\hline
\end{array}
$$

Question 3

Find the total savings of a boy who saves £ (4x-6y); £ (6x+2y); £ (4y-x)and £ (y-2x)for four consecutive weeks.

Solution:-

$$4x - 6y$$

$$6x + 2y$$

$$-x + 4y$$

$$-2x + y$$

$$7x + y$$

∴Total savings= (7x+y)

Question 4.

Subtract:

(i) $4xy^2$ from $3xy^2$

Solution:-

$3xy^2 - 4xy^2 = -xy^2$

(ii) $-2x^2y + 3xy^2$ from $8x^2y$

Solution:-

$$\begin{array}{r} 8x^2y \\ -2x^2y + 3xy^2 \\ + \quad - \\ \hline 10x^2y \quad 3xy^2 \\ \hline \end{array}$$

(iii) 3a-5b+c+2d from 7a-3b+c-2d

Solution:-

$$\begin{array}{r} 7a - 3b + c - 2d \\ 3a - 5b + c + 2d \\ - \quad + \quad - \quad - \\ \hline 4a + 2b \quad - 4d \\ \hline \end{array}$$

(iv) $x^3 - 4x - 1$ from $3x^3 - x^2 + 6$

Solution:-

$$
\begin{array}{r}
3x^3 - x^2 \quad + 6 \\
x^3 - 4x - 1 \\
+ \\
\hline
2x^3 - x^2 + 4x + 7 \\
\hline
\end{array}
$$

(v) $6a + 3$ from $a^3 - 3a^2 + 4a + 1$

Solution:-

$$
\begin{array}{r}
a^3 \;-\; 3a^2 \;+\; 4a \;+1 \\
\qquad\quad +\,6a \;\;+3 \\
\qquad\quad\;\; - \qquad\; - \\
\hline
a^3 \;-\, 3a^2 \;-2a \;\;-2 \\
\hline
\end{array}
$$

(vi) cab-4cad-cbd from 3abc+5bcd-cda

Solution:-

$$\begin{array}{r} 3abc + 5bcd - cda \\ +cab - cbd - 4cad \\ \hline 2abc+6bcd+3cad \end{array}$$

(vii) $a^2 + ab + b^2$ from $4a^2 - 3ab + 2b^2$

Solution:-

$$\begin{array}{r} 4a^2 - 3ab + 2b^2 \\ +a^2 + ab + b^2 \\ \hline 3a^2-4ab+b^2 \end{array}$$

Question 5.

(i) Take a $3x^3 + 4x^2 - 5x + 6$ from $3x - 4x^2 + 5x - 6)$

Solution:-

$$3x^3 - 4x^2 + 5x - 6$$

$$-3x^3 + 4x^2 - 5x + 6$$

$$+ \quad - \quad + \quad -$$

$$6x^3 - 8x^2 + 10x - 12$$

(ii)Take $m^2 + m + 4$ from $-m^2 + 3m + 6 and the result from m^2 + m + 1$

Solution:-

$$
\begin{array}{r}
-m^2 + 3m + 6 \\
\pm\, m^2 \pm m \pm 4 \\
\hline
-2m^2 + 2m + 2 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
-m^2 + m + 1 \\
-2m^2 + 2m + 2 \\
+ \quad - \quad - \\
\hline
3m^2 - m - 1 \\
\hline
\end{array}
$$

Question 6.

Subtract the sum of $5y^2 + y - 3$ and $y^2 - 3y + 7$ from $6y^2 + y - 2$

Solution:-

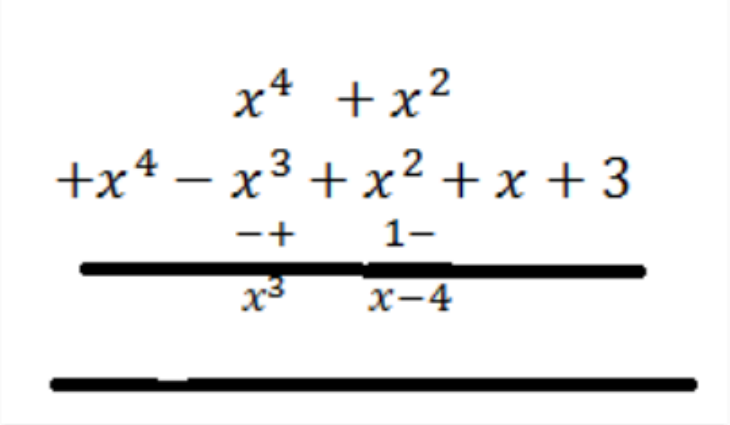
$$
\begin{array}{r}
5y^2 + y - 3 \\
y^2 - 3y + 7 \\
\hline
6y^2 - 2y + 4 \\
\hline
\end{array}
$$

$$
\begin{array}{r}
6y^2 + y - 2 \\
6y^2 - 2y + 4 \\
- \quad + \\
\hline
3y - 6 \\
\hline
\end{array}
$$

Question: 7

What must be added $x^4 - x^3 + x^2 + x + 3$ to obtain $x^4 + x^2 - 1$?

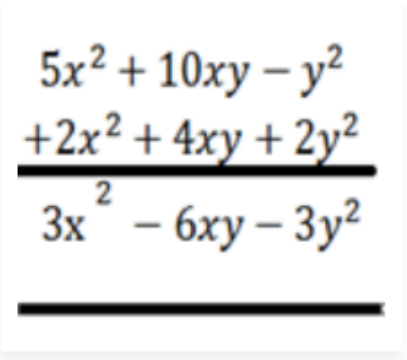
Solution:-



Question: 8

(i) How much more than $2x^2 + 4xy + 2y^2$ is $5x^2 + 10xy - y^2$?

Solution:-



(ii) How much less $2a^2 + 1$ is than $3a^2 - 6$?

Solution:-

$$\begin{array}{r} 3a^2 - 6 \\ 2a^2 + 1 \\ \hline a^2 - 7 \\ \hline \end{array}$$

Benefits of ICSE Class 8 Maths Selina Solutions Chapter 11

The Selina Solutions for ICSE Class 8 Maths, specifically Chapter 11 on Algebraic Expressions, offer several benefits to students:

Comprehensive Coverage: The solutions provided in Selina books are comprehensive and cover all the topics and concepts included in the ICSE Class 8 Maths syllabus for Algebraic Expressions.

Step-by-Step Solutions: Each problem in the exercises is solved step-by-step, which helps students understand the method and logic behind solving the problems.

Clarity in Concepts: The solutions are designed to clarify the underlying concepts. They often include explanations and illustrations that aid in understanding complex topics.

Practice Problems: The chapter typically includes a variety of practice problems of varying difficulty levels. The solutions guide students through solving these problems effectively.

Exam Preparation: By studying the Selina Solutions, students can prepare thoroughly for their exams. The solutions adhere to the ICSE exam pattern and provide practice in solving questions that are likely to appear in exams.

Self-Study Resource: Students can use the solutions for self-study and revision. They can attempt problems independently and then verify their solutions with the Selina Solutions to ensure correctness.

Consolidation of Learning: Using the solutions helps consolidate the learning of Algebraic Expressions. It reinforces understanding and helps in retaining the concepts for a longer period.

Additional Resources: Selina Solutions often include additional tips, notes, and alternative methods of solving problems, which enriches the learning experience.

Enhancement of Problem-Solving Skills: By following the solutions, students can enhance their problem-solving skills. They learn different approaches to tackle problems and improve their analytical thinking.

Supplementary Learning: For students who may find certain topics challenging, the solutions act as supplementary material that provides extra support and guidance.