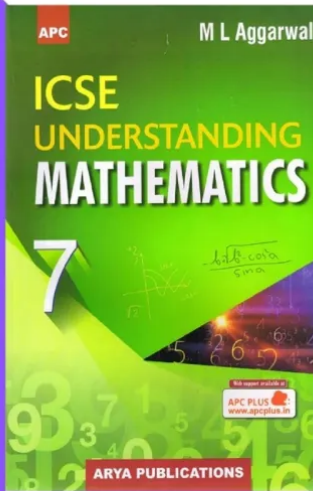


ML Aggarwal Solutions for Class 7 Maths

Chapter 8- Algebraic Expressions



ML Aggarwal Solutions

CLASS 7 MATHS

Chapter 8: Algebraic
Expressions

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Chapter 8- Algebraic Expressions

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ML Aggarwal Solutions for Class 7 Maths Chapter 8- Algebraic Expressions

ML Aggarwal 7th Maths Chapter 8, Class 7 Maths Chapter 8 solutions

1. From the algebraic expressions using variables, constants, and arithmetic operations:

(i) 6 more than thrice a number x .

Solution:-

$$3x + 6$$

(ii) 5 times x is subtracted from 13.

Solution:-

$$13 - 5x$$

(iii) The numbers x and y both squared and added.

Solution:-

$$x^2 + y^2$$

(iv) Number 7 is added to 3 times the product of p and q .

Solution:-

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$$3pq + 7$$

(v) Three times of x is subtracted from the product of x with itself.

Solution:-

$$x^2 - 3x$$

(vi) Sum of the numbers m and n is subtracted from their product.

Solution:-

$$mn - (m + n)$$

2. A taxi charges ₹ 9 per km and a fixed charge of ₹ 50. If the taxi is hired for x km, write an algebraic expression for this situation.

Solution:-

From the question it is given that,

A taxi charges ₹ 9 per km

A fixed charge of ₹ 50

If the taxi is hired for x km = ₹ $(9x + 50)$

3. Write down the algebraic expression whose terms are:

(i) $5a$, $-3b$, c

Solution:-

Expressions is defined as, numbers, symbols and operators (such as $+$, $-$, $\times$ and $\div$) grouped together that show the value of something.

So, Expressions = $5a - 3b + c$

(ii) x^2 , $-5x$, 6

Solution:-

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Expressions is defined as, numbers, symbols and operators (such as +, −, × and ÷) grouped together that show the value of something.

So, Expressions = $x^2 - 5x + 6$

(iii) $x^2y, xy, -xy^2$

Solution:-

Expressions is defined as, numbers, symbols and operators (such as +, −, × and ÷) grouped together that show the value of something.

So, Expressions = $x^2y + xy - xy^2$

4. Write all the terms of each of the following algebraic expressions:

(i) $3 - 7x$

Solution:-

In algebra a term is either a single number or variable, or numbers and variables multiplied together. Terms are separated by + or − signs or sometimes by division.

Terms = 3, $-7x$

(ii) $2 - 5a + \frac{1}{2}b$

Solution:-

In algebra a term is either a single number or variable, or numbers and variables multiplied together. Terms are separated by + or − signs or sometimes by division.

Terms = 2, $-5a, \frac{1}{2}b$

(iii) $3x^5 + 4y^3 - 7xy^2 + 3$

Solution:-

In algebra a term is either a single number or variable, or numbers and variables multiplied together. Terms are separated by + or − signs or sometimes by division.

Terms = $3x^5, 4y^3, -7xy^2, 3$

5. Identify the terms and their factors in the algebraic expressions given below:

(i) $-4x + 5y$

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

(iii) $1.2ab - 2.4b + 3.6a$

Solution:-

Expressions is defined as, numbers, symbols and operators (such as +, −, × and ÷) grouped together that show the value of something.

In algebra a term is either a single number or variable, or numbers and variables multiplied together. Terms are separated by + or − signs or sometimes by division.

Factors is defined as, numbers we can multiply together to get another number.

Sl.No.	Expression	Terms	Factors
(i)	$-4x + 5y$	$-4x5y$	$-4, x5, y$
(ii)	$xy + 2x^2y^2$	$xy2x^2y^2$	$x, y2, x, x, y, y$
(iii)	$1.2ab - 2.4b + 3.6a$	$1.2ab-2.4b3.6a$	$1.2, a, b-2.4, b3.6, a$

6. Show the terms and their factors by tree diagrams of the following algebraic expressions:

(i) $8x + 3y^2$

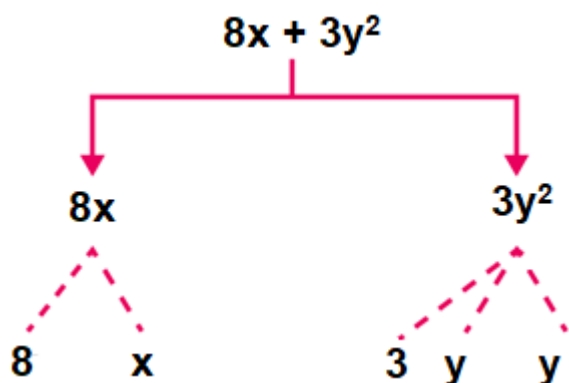
Solution:-

Expression: $8x - 3y^2$

Terms: $8x, -3y^2$

Factors: $8, x; 3, y, y$

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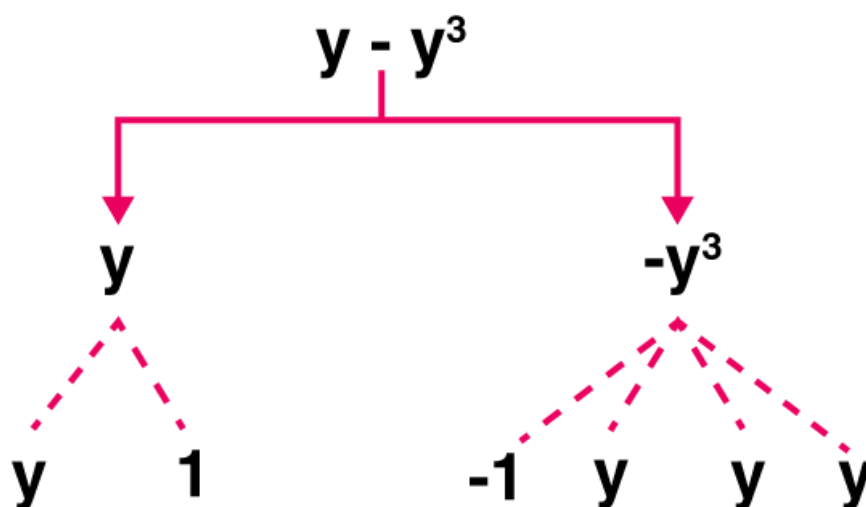
(ii) $y - y^3$

Solution:-

Expression: $y - y^3$

Terms: $y, -y^3$

Factors: $y; -y, -y, -y$



(iii) $5xy^2 + 7x^2y$

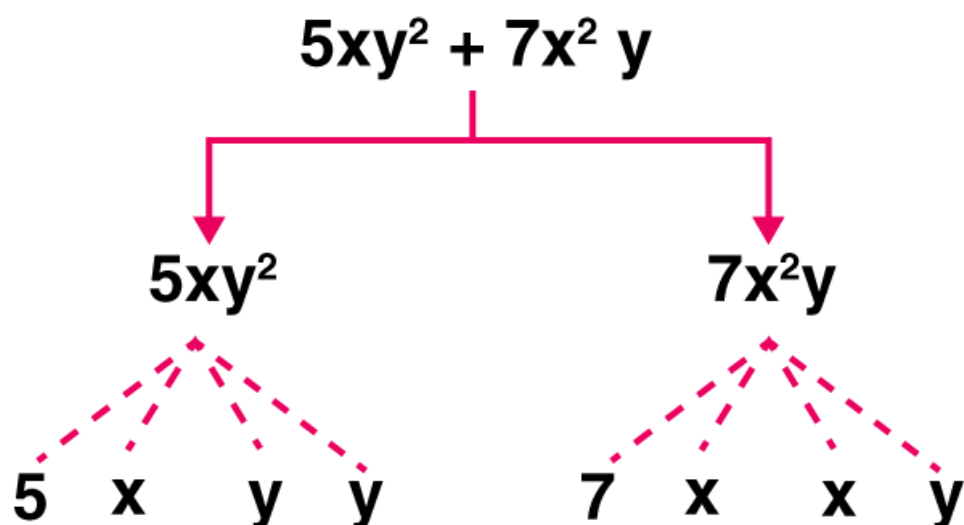
Solution:-

Expression: $5xy^2 + 7x^2y$

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Terms: $5xy^2$, $7x^2y$

Factors: 5, x, y, y; 7, x, x, y



(iv) $-ab + 2b^2 - 3a^2$

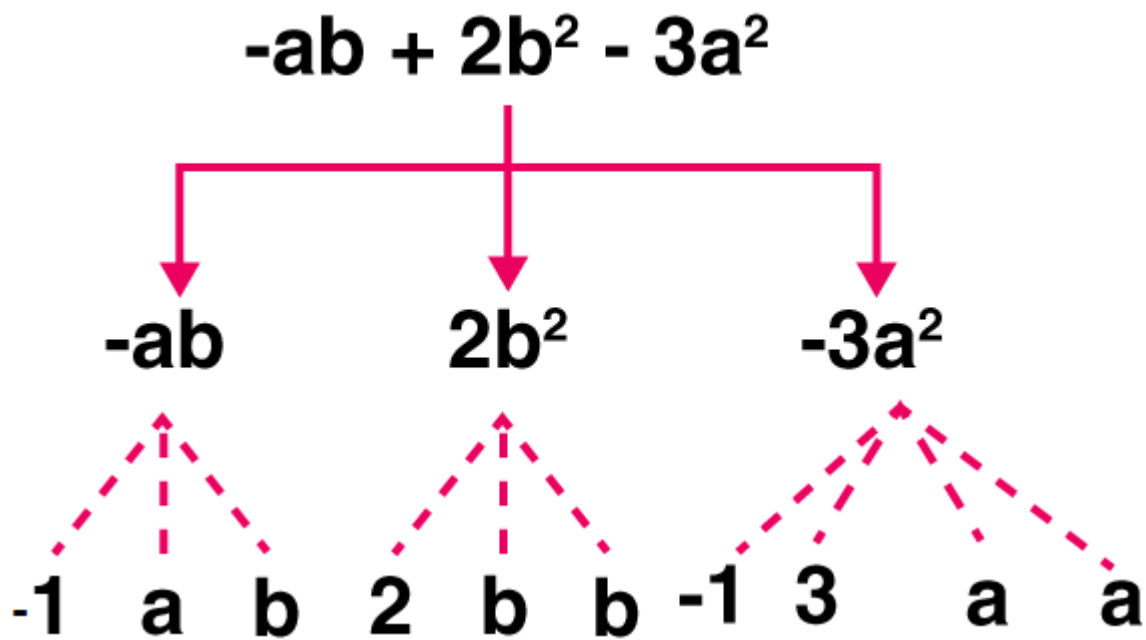
Solution:-

Expression: $-ab + 2b^2 - 3a^2$

Terms: $-ab$, $2b^2$, $-3a^2$

Factors: $-a$, b ; 2, b , b ; -3 , a , a

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7. Write down the numerical coefficient of each of the following:

(i) $-7x$

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

(iii) $6abcd^2$

(iv) $(\frac{2}{3})pq^2$

Solution:-

A coefficient is a number used to multiply a variable ($3x$ means 3 times x , so 3 is a coefficient) Variables on their own (without a number next to them) actually have a coefficient of 1 (x is really $1x$)

Then,

(i) $-7x$ numerical co-efficient is -7

(ii) $-2x^3y^2$ numerical co-efficient is -2

(iii) $6abcd^2$ numerical co-efficient is 6

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(iv) $(\frac{2}{3})pq^2$ numerical co-efficient is $\frac{2}{3}$



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- Chapter 2- Fractions and Decimals
- Chapter 3- Rational Numbers
- Chapter 4- Exponents and Powers
- Chapter 5- Sets
- Chapter 6- Ratio and Proportion
- Chapter 7- Percentage and Its Applications
- Chapter 8- Algebraic Expressions
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- Chapter 11- Triangles and its Properties
- Chapter 12- Congruence of Triangles
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About ML Aggarwal

M. L. Aggarwal, is an Indian mechanical engineer, educator. His achievements include research in solutions of industrial problems related to fatigue design. Recipient Best Paper award, Manipal Institute of Technology, 2004. Member of TSTE.

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