



STANDARD 8TH: CHAPTER 6

Factorisation of Algebraic expressions

Q.1 Choose the correct alternatives.

- $(a + 2b)^2 - (a + 2b)(3a - 7b)$ by factorization gives_____.

 - $(a + 2b)(9b - 2a)$
 - $(a + 2b)^2 - (3a^2 - 9b)$
 - $(a + 2b)^2(b - 2a)$
 - None of these

- Factorization of $x + xy + 2y + 2y^2$ gives_____.

 - $x^2 + 2xy$
 - $(1 + y)(x + 2y)$
 - $(1 + y)(x + y)$
 - $(1 + y^2)(1 + x^2)$

- Factorise $7x - 3y + 49x^2 - 9y^2$

 - $(7x + 3y)(1 + 7x + 3y)$
 - $(7x - 3y)(1 + 7x - 3y)$
 - $(7x + 3y)(1 + 7x - 3y)$
 - $(7x - 3y)(1 + 7x + 3y)$

- Factorise $t^2 - 25r^2 - 2t - 10r + q^2 - 121z^2 - 4q - 44z$

 - $(t + 5r)(t - 5r - 2) + (q + 11z)(q - 11z - 4)$
 - $(t + 5r)(t - 5r + 2) + (q + 11z)(q + 11z - 4)$
 - $(t + 5r)(t - 5r - 2) + (q + 11z)(q - 11z - 4)$
 - $(t - 5r)(t - 5r - 2) + (q + 11z)(q - 11z + 4)$

- Factorize $49j^2 - 70jk + 25k^2 + l^2 + 4lt + 4t^2$

 - $(7k - 5j)^2 + (l + 4t)^2$
 - $(7j - 5k)^2 + (l + 2t)^2$
 - $(7j + 5k)^2 + (l + 2t)^2$
 - $(7k - 5j)^2 + (l - 4t)^2$

- What are factors of $(g + h)^2 - 4gh$?

 - $g^2 + h^2$
 - $g + h$
 - $g - h$
 - gh

7. If $2x - 3$ is a factor of $6x^2 - 7x - 3$ what is the other factor?
- $x - 1$
 - $3x - 1$
 - $1 - 3x$
 - $1 - x$
8. What is HCF of $11abc^3$, $13a^2b^2c$ and $17ab^3c^2$?
- $a^2b^3c^3$
 - a^2b^2c
 - abc^3
 - abc
9. If $x + y = 7$ and $xy = 3$ then find the value of $\sqrt{x^4 + y^4 + 2x^2y^2}$
- 45
 - 42
 - 43
 - 46
10. $(x + 2)$ is a factor of $3x^3 - x^2 - px - 4$, then the value of p is:
- 10
 - 12
 - 14
 - 16

Q.2 Solve the following

- If $x + y = 7$ and $xy = 3$ then find the value of $x^2 - y^2$
- If $x - 2$ is a factor of $2x^3 - x^2 - px - 2$.
 - find the value of p
 - With the value of p , factorize the above expression completely
- The area of a rectangular field is given by the expression $4y^2 - 25$. If the length of the field is $(2y + 5)$ meters, find its width.
- A company sells a product with a revenue function given by $R(x) = x^3 + 3x^2 - 4x - 12$ dollars. If the company wants to factorize the revenue function to find the points at which the revenue is zero, factorize $R(x)$ and find the values of x for which $R(x) = 0$.

5. Factorize the following expression: $3x^2 + 12xy + 12y^2$.
6. Factorize the following expression completely: $x^3 - 8$.
7. Factorize the following quadratic expression: $4x^2 - 12x + 9$.
8. What is the common factor of $4x^2 + 12x + 9$ and $4x^2 - 9$?
9. What is algebraic expression?
10. Give 5 examples of algebraic expression.