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Subject: Maths   Class:8   Topic: Ch.6 Algebraic Expressions

Watch video #14 & 15, and solve the following exercise:

EXERCISE 6.1

Use **Cordova Smart Class Software** on the **smart board** in class to do Exercise.

1. Write the coefficient and constant term of each of the following expressions :
   (i) $5ab^2c - 4ab + 1$
   (ii) $3 + a^2 - 5b^2$
   (iii) $6x^2y^2 - 5x^2z^2 + 7$
   (iv) $-ab + 2a^2b^2 + 5$

2. Classify the following polynomials as monomial, binomial and trinomial :
   (i) $2x + y$
   (ii) $a^2 + a - 5$
   (iii) $5x - 2y + 3xy$
   (iv) $3a$
   (v) $7ab - 5a$
   (vi) $x^2 - 5$

3. List the like terms in each of the following :
   (i) $6a, 13b^2, -2a, 2a^2, -b^2, bc$
   (ii) $4x^2, -5x, 6, 7x, -2x^2, -3$
   (iii) $2a^2b^2, 6a^2b, 2ab^2, -3a^2b^2, 7ab^2, -9a^2b$

4. Add the following :
   (i) $x^2, 2x^2, -6x^2$
   (ii) $xy - yz, yz + 2xy$
   (iii) $3x^2y^2 - 4xy + 5, 2x^2y^2 + 3xy - 7$
   (iv) $7xy + 4xz - 2yz, 2xy - 3xz + 6yz$

5. Subtract :
   (i) $6x^2$ from $-2x^2$.
   (ii) $4a + 5ab - 7$ from $3a - 2ab - 6$.
   (iii) $6x^2y^2 - 7x^2y + 4xy^2 + 11$ from $5x^2y^2 - 3x^2y + 5xy^2 + 7$. (iv) $7a^3b - 4a^2b^2 + 9$ from $3a^3b + 2a^2b^2 + 7$.

6. Add $2xy + 3yz - 6xz, 4xy - 2yz + 7xz$ and $-xy - 2yz + 4xz$.

7. Subtract $x^2 - \frac{5}{2}x + 7$ from $\frac{1}{3}x^2 + \frac{1}{2}x + 2$.

8. Add $2x^2 - 5x^2y^2 + 2xy$ and $6xy + 4x^2 - 7$ and subtract the result from $-xy + x^2 + 7x^2y^2$.

9. How much is $5a^2 - 2ab + c^2$ less than $2a^2 + 7ab + 2c^2$?

10. From the sum of $2x - y + 7$ and $2y - 10$, subtract $4x - 2y - 11$.

11. From the sum of $7 + 3x$ and $6 - 2x + x^2$, subtract the sum of $2x^2 - 3x$ and $2x^2 + 3x - 9$.

12. What should be subtracted from $3a + 7b - 10$ to get $-2a - 7b + 9$?

13. Find the value of following polynomials, when $m = -2$:
    (i) $3m - 7$
    (ii) $2m^2 + 5m - 3$
    (iii) $3m^3 + 2m^2 - 3m + 5$

14. What should be the value of n if $3x^2 - x - n = 6$, where $x = 1$?

15. What should be taken away from $5x^2 + 4y^2 + 10xy$ to obtain $2x^2 + 6y^2 + 9xy$?