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

Watch video #17, and solve the following exercise:

EXERCISE 6.3

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

1. Find the following products :
   (i) $3a^2\,(2a + 3b)$ (ii) $2a^3\,(3a - b)$ (iii) $7a\,(2a + 5b)$
   (iv) $-5x\,(4x - 3b)$ (v) $2.1x\,(2.1x - 3y)$ (vi) $ab\,(a^3 - b^3)$
   (vii) $2.5x\,(10x^2 + 100y)$ (viii) $\frac{2}{3}xy\,(x^2y - xy^2)$ (ix) $\frac{2}{5}x\,(x^3 + y^2 - z^2)$
2. Simplify :
   (i) $6x\,(x - 3) + x\,(2 - 5x) + 3x^2$ (ii) $x\,(2x - xy) - 2y\,(3y - 2x^2y) + x^2\,(1 + y^2)$
   (iii) $a^2\,(b^2 - 2a) - 3b\,(b - 2a^2b) + a^2\,(3 - 2b^2)$ (iv) $4xy\,(y - x) - 3y^2\,(x^2 - x) - 5x^2\,(y - y^2)$
   (v) $a\,(b - c) + c\,(a - b) + b\,(c - a)$ (vi) $a^3\,(2b - a^2) - 2b\,(a^3 - a^2) + 3a^2\,(a^3 - b)$
3. Find the product of $3x^3y^2$ and $(2x - 3y)$. Also, verify the result for $x = -1$, $y = 2$.
4. Multiply $\frac{2}{3}x^3y^3$ by $(3x - 15y)$ and verify the result for $x = 2$, $y = -1$.
5. Subtract :
   (i) $2a\,(a - 3b + 5c)$ from $5a\,(2a - 3c + b)$
   (ii) $3x\,(x - y - z) + 3y\,(x - y + z) + 3z\,(x + y - z)$ from $3\,(x + y)\,(x - y) + 3z\,(2y + z)$
6. Add : (i) $a\,(a - b)$, $b\,(c - a)$ and $c\,(b - a)$ (ii) $2x\,(y - 2x + z)$ and $3y\,(2z + x + x^2)$