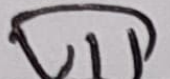


gōwmya Priyadarsini

class:  sec = B

1. Multiply

$$\begin{aligned} \text{i)} \quad & 3x, 5x^2y \text{ and } 2y \\ & = 3 \times 5 \times 2 \times x \times x^2 \times y \times y \\ & = 30x^3y^2 \end{aligned}$$

$$\begin{aligned} \text{ii)} \quad & 5x + 2y \text{ and } 3xy \\ & = 3xy(5x + 2y) \\ & = 3xy \times 5x + 3xy \times 2y \\ & = 15x^2y + 6xy^2 \end{aligned}$$

$$\begin{array}{r} \text{v)} \quad 4a + 5b \text{ and } -2a \\ \quad \times 4a + 5b \\ \quad \quad 4a - 5b \\ \hline 16a^2 + 20ab \\ \quad - 20ab - 25b^2 \\ \hline 16a^2 \quad \quad - 25b^2 \end{array}$$

$$\begin{aligned} \text{vii)} \quad & -3m^2n + 5mn - 4mn^2 \text{ and } 6m^2n \\ & = 6m^2n(-3m^2n + 5mn - 4mn^2) \\ & = 6m^2n \times (-3m^2n) + 6m^2n \times 5mn + 6m^2n \times (-4mn^2) \\ & = -18m^4n^2 + 30m^3n^2 - 24m^3n^3 \end{aligned}$$

$$\begin{aligned} \text{ii)} \quad & 5, 3a \text{ and } 2ab^2 \\ & = 5 \times 3 \times 2 \times a \times ab^2 \\ & = 30a^2b^2 \end{aligned}$$

$$\begin{aligned} \text{iv)} \quad & 6a - 5b \text{ and } -2a \\ & = -2a(6a - 5b) \\ & = -2a \times 6a + (-2a)(-5b) \\ & = -12a^2 + 10ab \end{aligned}$$

$$\begin{array}{r} \text{vi)} \quad 9xy + 2y^2 \text{ and } 2x - 3y \\ \quad \times 9xy + 2y^2 \\ \quad \quad 2x - 3y \\ \hline 18x^2y + 4xy^2 \\ \quad - 27xy^2 - 6y^3 \\ \hline 18x^2y - 23xy^2 - 6y^3 \end{array}$$

$$\begin{aligned} \text{viii)} \quad & 6xy^2 - 7x^2y^2 + 10x^3 \text{ and } -3x^2y^3 \\ & = -3x^2y^3(6xy^2 - 7x^2y^2 + 10x^3) \\ & = -3x^2y^3 \times 6xy^2 + (-3x^2y^3)(-7x^2y^2) \\ & \quad + (-3x^2y^3) \times 10x^3 \\ & = -18x^3y^5 + 21x^4y^5 - 30x^5y^3 \end{aligned}$$

Copy and complete the following multiplication.

$$\begin{array}{r} i) \times 3a + 2b \\ - 3xy \\ \hline -9axy - 6bxy \end{array}$$

$$\begin{array}{r} ii) \times 9x - 5y \\ - x - 3xy \\ \hline -27x^2y + 15xy^2 \end{array}$$

$$\begin{array}{r} iii) \times 3xy - 2x^2 - 6x \\ - 5x^2y \\ \hline -15x^3y^2 + 10x^4y + 30x^3y \end{array}$$

$$\begin{array}{r} iv) \times a + b \\ a + b \\ \hline a^2 + ab \\ ab + b^2 \\ \hline a^2 + 2ab + b^2 \end{array}$$

$$\begin{array}{r} v) \times ax - b \\ 2ax + 2b^2 \\ \hline 2a^2x^2 - 2abx + 2ab^2x - 2b^3 \end{array}$$

$$\begin{array}{r} vi) \times 2a - b + 3c \\ \cdot 2a - 4b \\ \hline 4a^2 - 2ab + 6ac \\ - 8ab + 4b^2 + 12bc \\ \hline 4a^2 - 10ab + 6ac + 4b^2 - 12bc \end{array}$$

$$\begin{array}{r} vii) \times 3m^2 + 5m - 2n \\ 5n - 3m \\ \hline 15m^2n + 30mn - 10n^2 - 9m^3 - 18m^2 \\ + 6mn \\ \hline 15m^2n + 36mn - 10n^2 - 9m^3 - 18m^2 \end{array}$$

$$\begin{array}{r} viii) \times 6 - 3x + 2x^2 \\ 1 + 5x - x^2 \\ \hline 6 - 3x + 2x^2 \\ + 30x - 15x^2 + 10x^3 \\ \hline 6x^2 + 3x^3 - 2x^4 \\ \hline 6 + 27x - 19x^2 + 13x^3 - 2x^4 \end{array}$$

$$\begin{array}{r} ix) \times 4x^3 - 10x^2 + 6x - 8 \\ - 3 + 2x - x^2 \\ \hline \Phi \end{array}$$

$$\begin{array}{r} ix) \times 4x^3 - 10x^2 + 6x - 8 \\ 3 + 2x - x^2 \\ \hline 12x^3 - 30x^2 + 18x - 24 \\ 8x^4 - 20x^3 + 12x^2 - 16x \\ \hline 4x^5 + 10x^4 - 6x^3 + 8x^2 \\ \hline 4x^5 + 18x^4 - 14x^3 - 10x^2 + 2x - 24 \\ = 4x^5 + 18x^4 - 14x^3 - 10x^2 + 2x - 24 \end{array}$$