

Ex 20 (A)

$$2) \text{ Ans) } a \times 10 = a \times 8 + 1 \times 10 = 8 \times 3$$

$$= 20 = 24 + 10 = 16$$

$$= 4$$

$$4) \text{ Ans) } 6 \times 20 = 2 \times 10 = 8 \times 2 = 8 \times 1$$

$$= 120 = 20 = 10 = 27$$

$$= 63$$

$$5) \text{ Ans) } a + b + c = \frac{6+7+8}{2 \times 15} = \frac{10}{10} = 1$$

$$5) \text{ Ans) } 5x^2 = 5 \times 2 \times 2 = 20$$

$$3x = 3 \times 2 = 6$$

$$5x^2 - 3x + 2$$

$$= 20 - 6 + 2$$

$$= 14 + 2$$

$$= 16$$

$$7) \text{ Ans) } x^3 = 1 \times 1 \times 1 = 1$$

$$8x^2 = 8 \times 1 \times 1 = 8$$

$$12x = 12 \times 1 = 12$$

$$x^3 - 8x^2 + 12x - 5$$

$$= 1 - 8 + 12 - 5$$

$$= 1 - 5 + 12 - 5 = -7 + 12 - 5$$

$$= 2 - 5 = 5 - 5$$

$$= 0 = 0$$

$$a) x=2 \quad y=5 \quad z=4$$

$$v) a) \frac{x^2 y^2 z^2}{xz} = \frac{2 \times 2 \times 5 \times 5 \times 4 \times 4}{2 \times 4} = \frac{1400}{8} = 200$$

$$vi) Ans) \frac{x^2 y^2 z^2}{xz} = \frac{2 \times 2 \times 2 \times 2 \times 2 \times 5 \times 5 \times 5 \times 5 \times 4 \times 4}{2 \times 4}$$

$$\frac{5 \times 4 \times 4 \times 2 \times 2}{2 \times 2 \times 2} = \frac{5 \times 2 \times 4 \times 5 \times 5 \times 4 \times 4}{2 \times 2 \times 2} = \frac{16000}{8} = 2000$$

$$\frac{5x^4 y^2 z^2}{2x^2} = \frac{5 \times 16 \times 25 \times 16^8}{2 \times 4} = \frac{25}{16} = \frac{4000}{1} = 4000$$

$$1) Ans) 4m^3 = 4 \times (2 \times 2 \times 2) = 4 \times 8 = 32$$

$$3m^4 = 3 \times (2 \times 2 \times 2 \times 2) = 3 \times 16 = 48$$

$$Ans) = 4 \times 32 = 48 = -16$$

Ex 20B

$$\begin{aligned} 1. \text{vi)} & (3y + 8y) - 5y \\ & = 11y - 5y = 6y \end{aligned}$$

$$\begin{aligned} 2) \text{ii)} & (15b - 6b) - (8b + 4b) \\ & = 11b - 12b \\ & = -b \end{aligned}$$

$$\begin{aligned} \text{vi)} & p + (q - r - s) - (p + q - r) \\ & = p - \cancel{q} - \cancel{r} - s - p + \cancel{q} + \cancel{r} \\ & = -s \end{aligned}$$

$$\begin{aligned} \text{x)} & 6a^2 + (2a^2 - a^2) - (a^2 - b^2) \\ & = 6a^2 + 2a^2 - a^2 - a^2 + b^2 \\ & = 8a^2 - a^2 - a^2 + b^2 \\ & = 6a^2 + b^2 \end{aligned}$$

$$\begin{aligned} \text{vii)} & (a + b) - (c + d) - (e - f) \\ & = a + b - c - d - e + f \end{aligned}$$

$$\begin{aligned} \text{iii)} & a - (a - b - c) \\ & = a - \cancel{a} + b + c \\ & = b + c \end{aligned}$$

$$\begin{aligned} \text{xii)} & -m - n - (-m) - m \\ & = -m - n + m - m \end{aligned}$$

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$$2a + \frac{3}{b} + 4 \quad 4y^2 - 3x^3 + y^2x^7$$

\downarrow \downarrow \downarrow
 2 3 9

~~$$-ab^3 + 2b^3a - 2a^3 + 4a^3 + a + 5a + b^3 + b - 2b$$

$$= 0 + 2a^3$$~~

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

~~$$-2b + 2b^3 - 5a + 4a^3$$~~

$$= 4x^3y^3 - 12x^3y^3$$

$$(8x + 7y) - (4y - 3x)$$

$$= 8x + 7y - 4y + 3x$$

$$= 8x + 3x + 7y - 4y$$

$$= 11x$$

$$ab - 2cd + 2ac + bd$$
~~$$-2ab - cd + ac + 2bd$$~~

$$-cd + ac - bd$$

$$-ab - 3cd + ac + 3bd$$

$$\begin{array}{r} 1 \\ 72 \\ \times 6 \\ \hline 432 \end{array}$$

~~$$3a^2 + 2ab - b^2$$

$$2a^2 + 3b^2$$~~

$$\begin{array}{r} 3 \\ 36x^2 \\ \times 6 \\ \hline 216x^3y^2 \end{array}$$

Exercise 20(B)

$$\begin{aligned} \text{Q3) i)} \quad & x - (y - z) + x + (y - z) + y - (z + x) \\ & = x - y + z + x + y - z + y - z - x \\ & = x + y - z \end{aligned}$$

$$\begin{aligned} \text{ii)} \quad & x - [y + \{x - (y + x)\}] \\ & = x - [y + \{x - y\}] \\ & = x - [y + \{-y\}] \\ & = x - [y - y] \\ & = x - 0 = x \end{aligned}$$

$$\begin{aligned} \text{iv)} \quad & 2(3a - b) - 5(a - 3b) \\ & = 6a - 2b - 5a + 15b \\ & = a + 13b \end{aligned}$$

$$\begin{aligned} \text{v)} \quad & p + 2(q - \overline{\pi + p}) \\ & = p + 2(q - \pi - p) \\ & = p + 2q - 2\pi + 2p \\ & = 3p + 2q - 2\pi \end{aligned}$$

$$\begin{aligned} \text{vi)} \quad & 3x - [5y - \{6y + 2(10y - x)\}] \\ & = 3x - [5y - \{6y + 20y - 2x\}] \\ & = 3x - [5y - \{26y - 2x\}] \\ & = 3x - [5y - 26y + 2x] \\ & = 3x - 5y + 26y - 2x \\ & = x + 21y \end{aligned}$$