

Home Assignment

Ex-(19(c))

2i) $4x \times 6x \times 2 =$

Ans) ~~$4 \times 6 \times 2 = 48$~~
 ~~$x \times x = x^2$~~

$\Rightarrow 48x^2$

ii) $3ab \times 6ax$

Ans) $18a^2bx$

iii) $x \times 2x^2 \times 3x^3$

Ans) $6x^6$

iv) $5 \times 5a^3$

Ans) $25a^3$

v) $6 \times 6x^2 \times 6x^2y^2$

Ans) $216x^{(2+2)}y^2$

$= 216x^4y^2$

vi) $-8x \times -3x$

Ans) ~~$24x$~~ $24x^{(1+1)}$

$= 24x^2$

$$\text{vii)} \quad -5x \times -3x \times 5x^2$$

$$\text{Ans)} \quad 75x^{(1+2)}$$

$$= 75x^3$$

$$\text{viii)} \quad 8x \times -4xy^2 \times 3x^3y^2$$

$$\text{Ans)} \quad -96x^{(1+3)}y^{(2+2)}$$

$$= -96x^4y^4$$

$$\text{ix)} \quad -4x \times 5xy \times 3z$$

$$\text{Ans)} \quad -60x^{(1+1)}yz$$

$$= -60x^2yz$$

$$x \quad 5x \times 2x^2y \times -7y^3 \times 2x^3y^2$$

$$\text{Ans)} \quad -140x^{(1+2+3)}y^{(1+3+2)}$$

$$= -140x^6y^6$$

$$\text{3i)} \quad 3x^3 \times 5x^4$$

$$\text{Ans)} \quad 15x^{(3+4)}$$

$$= 15x^7$$

$$\text{ii)} \quad 5a^2 \times 7a^7$$

$$\text{Ans)} \quad 35a^{(2+7)}$$

$$= 35a^9$$

iii) $3abc \times 6ac^3$

Ans) $18a^{(1+1)}b^1c^{(1+3)}$
 $= 18a^2bc^4$

iv) $a^2b^2 \times 5a^3b^4$

Ans) $5a^{(2+3)}b^{(2+4)}$
 $= 5a^5b^6$

v) $2x^2y^3 \times 5x^3y^4$

Ans) $10x^{(2+3)}y^{(3+4)}$
 $= 10x^5y^7$

~~vi)~~ vi) $abc \times bcd$

Ans) $ab^{(1+1)}c^{(1+1)}d$
 $= ab^2c^2d$

7i) $x+2$ and $x+10$

Ans) $x(x+10) + 2(x+10)$

$= x^2 + 10x + 2x + 20$

$= x^2 + 12x + 20$

ii) $x+5$ and $x-3$

Ans $x(x-3) + 5(x-3)$

$$= x^2 - 3x + 5x - 15$$

$$= x^2 - 8x - 15$$

iii) $x-5$ and $x+3$

Ans ~~$x(x+3)$~~ $x(x+3) - x(x+3)$

$$= x^2 + 3x - x^2 + 3x$$

$$= x^2 + 6x - x^2$$

$$= 6x$$

iv) $x-5$ and $x-3$

$$= x(x-3) - 5(x-3)$$

$$= x^2 - 3x - 5x - 15$$

$$= x^2 - 15x - 15$$

v) $2x+y$ and $x+3y$ = ~~$2x+y$~~

$$= 2(x+3y) + y(x+3y)$$

$$= 2x + 6y + xy + 3y^2$$

$$\begin{aligned} \text{vi)} \quad & 3x - 5y \text{ and } x + 6y \\ &= 3x(x + 6y) - 5y(x + 6y) \\ &= 3x^2 + 18xy - 5xy + 11y \end{aligned}$$

$$\Rightarrow \text{0 } \cancel{3x^2} + \cancel{23xy} =$$

$$= 3x^2 + 13xy + 11y$$

$$\begin{aligned} \text{vii)} \quad & x + 9y \text{ and } x - 5y \\ &= x(x - 5y) + 9y(x - 5y) \end{aligned}$$

$$= x^2 - 5xy + 9xy - 45y^2$$

$$= x^2 + 4xy - 45y^2$$

$$\begin{aligned} \text{viii)} \quad & 2x + 5y \text{ and } 2x + 5y \end{aligned}$$

$$= 2x(2x + 5y) + 5y(2x + 5y)$$

$$= 4x^2 + 10xy + 10xy + 25y^2$$

$$= 4x^2 + 20xy + 25y^2$$

Ex-19 (D)

2i) $2x^5 \div 2x^2$

$$= \frac{2x^5}{x^2}$$

$$= 2x^{(5-2)}$$

$$= 2x^3$$

iv) $-24a^2b^2c^2 \div 6abc$

$$= \frac{-24a^2b^2c^2}{6abc}$$

$$= -4a^{(2-1)}b^{(2-1)}c^2$$

$$= -4abc^2$$

ii) $6a^8 \div 3a^3$

$$= \frac{6a^8}{3a^3}$$

$$= 2a^{(8-3)}$$

$$= 2a^5$$

v) $-5x^2y \div xy^2$

$$= \frac{-5x^2y}{xy^2}$$

$$= -5x^{(2-1)}y^{(1-2)}$$

$$= -5xy^{-1} = -5xy^{-1}$$

iii) $20xy \div -5xy$

$$= \frac{20xy}{-5xy}$$

$$= -4$$

$$= \frac{-5x}{y}$$

vi) $40p^3q^4r^5 \div 10p^3q$

$$= \frac{40p^3q^4r^5}{10p^3q}$$

$$= 4p^{(3-3)}q^{(4-1)}r^5$$

$$= 4q^3r^5$$

~~iv) $-24a^2b^2c^2 \div 4x^3y^2z$~~

~~$$= \frac{-24a^2b^2c^2}{4x^3y^2z}$$~~

~~$$= -6a^2$$~~

$$\text{vi)} \quad -64x^4y^3z \div 4x^3y^2z$$

$$= \frac{-64x^4y^3z}{4x^3y^2z}$$

$$= -16x^{(4-3)}y^{(3-2)}z^{(1-1)}$$

$$= -16xy$$

$$\text{vii)} \quad 35xy^5 \div 7x^2y^4$$

$$= \frac{35xy^5}{7x^2y^4}$$

$$= 5x^{(1-2)}y^{(5-4)}$$

$$= 5x^{-1}y$$

$$= \frac{5y}{x}$$

$$\text{3i)} \quad \frac{-3m}{4} \text{ by } 2m$$

$$= \frac{\frac{-3m}{4}}{2m}$$

$$= \frac{-3m}{4 \times 2m}$$

$$= \frac{-3m}{4 \times 2m}$$

$$= \frac{-3}{8}$$

ii) $-15p^6q^8$ by $-5p^6q^7$

$$= \frac{-15p^6q^8}{-5p^6q^7}$$

$$= 3p^{(6-6)}q^{(8-7)}$$

$$= 3q$$

iii) $-21m^5n^7$ by $14m^2n^2$

$$= \frac{-21m^5n^7}{14m^2n^2}$$

$$= \frac{-3}{2} m^{(5-2)}n^{(7-2)}$$

$$= \frac{-3}{2} m \cdot \frac{-3}{2} m^3n^5$$

iv) ~~$36a^4x$~~

iv) $36a^4x^5y^6$ by $4x^2a^3y^2$

$$= \frac{36a^4x^5y^6}{4x^2a^3y^2}$$

$$= 9a^{(4-3)}x^{(5-2)}y^{(6-2)}$$

$$= 9ax^3y^4$$

v) $20x^3a^6$ by $5xy$

$$= \frac{20x^3a^6}{5xy}$$

$$= \frac{4x^{(3-1)}a^6}{y}$$

$$= \frac{4x^2a^6}{y}$$

vi) $\frac{28a^2b^3}{c^2}$ by $4abc$

$$= \frac{28a^2b^3}{c^2}$$

$$\frac{4abc}{4abc}$$

$$= \frac{28a^2b^3}{c^2 \times 4abc}$$

$$= \frac{7a^{(2-1)}b^{(3-1)}}{c^3}$$

$$= \frac{7ab^2}{c^3}$$

vii) $\frac{2a^2}{9b^2}$ by $\frac{3b}{2a}$

$$= \frac{\frac{2a^2}{9b^2}}{\frac{3b}{2a}}$$

$$= \frac{2a^2 \times 2a}{9b^2 \times 3b}$$

$$= \frac{4a^3}{27b^3}$$

viii) $\frac{-5.5x^2}{y}$ by $\frac{11x}{y}$

$$= \frac{-5.5x^2}{y}$$

$$\frac{11x}{y}$$

$$= \frac{-5.5x^2}{y} \times \frac{y}{11x}$$

$$= \frac{-5.5x^2 y}{11xy}$$

$$= \frac{-5.5x}{11}$$

ix) $\frac{64x^2y^2}{z^2}$ \times $\frac{z}{8xy}$

$$= \frac{64x^2y^2z}{z^2 \times 8xy}$$

$$= \frac{8xy}{z}$$