

Revision ch-19 (C) and (D)

Ex - 19 (C)

2) Fill in the blanks.

i) $4x \times 6x \times 2 = 48x^2$

ii) $3ab \times 6ax = 18a^2bx$

iii) $x \times 2x^2 \times 3x^3 = 6x^6$

iv) $5 \times 5a^3 = 25a^3$

v) $6x \times 6x^2 \times 6x^2y^2 = 216x^4y^2$

vi) $-8x \times -3x = 24x^2$

vii) $-5x \times -3x \times 5x^2 = 75x^3$

viii) $8x \times -4xy^2 \times 3x^3y^2 = -96x^4y^4$

ix) $-4x \times 5xy \times 3z = -60x^2yz$

x) $5a \times 2x^2y \times -7y^3 \times 2x^3y^2 = -140x^5y^5$

3. Find the value of :

i) $3x^3 \times 5x^4 = 15x^7$

ii) $5a^2 \times 7a^7 = 35a^9$

iii) $3abc \times 6ac^3 = 18a^2bc^4$

iv) $a^2b^2 \times 5a^3b^4 = 5a^5b^6$

v) $2x^2y^3 \times 5x^3y^4 = 10x^5y^7$

vi) $abc \times bcd = ab^2c^2d$

7. Multiply:

i) $x+2$ and $x+10 = x^2 + 12x + 20$

$$= (x+2)(x+10)$$

$$= x(x+10) + 2(x+10)$$

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

$$= x^2 + 12x + 20$$

$$\begin{aligned} \text{ii) } & x+5 \text{ and } x-3 \\ & = x(x-3) + 5(x-3) \\ & = x^2 - 3x + 5x - 15 = x^2 + 2x - 15 \end{aligned}$$

$$\begin{aligned} \text{iii) } & x-5 \text{ and } x+3 \\ & = (x-5)(x+3) \\ & = x(x+3) - 5(x+3) \\ & = x^2 + 3x - 5x - 15 = x^2 - 2x - 15 \end{aligned}$$

$$\begin{aligned} \text{iv) } & x-5 \text{ and } x+3 \\ & = (x-5)(x+3) \\ & = x(x+3) - 5(x+3) \\ & = x^2 + 3x - 5x - 15 = x^2 - 2x - 15 \end{aligned}$$

$$\begin{aligned} \text{v) } & (2x+y)(x+3y) \\ & = 2x(x+3y) + y(x+3y) \\ & = 2x^2 + 6xy + xy + 3y^2 \\ & = 2x^2 + 7xy + 3y^2 \end{aligned}$$

$$\begin{aligned} \text{vi) } & 3x-5y \text{ and } x+6y \\ & = (3x-5y)(x+6y) \\ & = 3x(x+6y) - 5y(x+6y) \\ & = 3x^2 + 18xy - 5xy - 30y^2 \\ & = 3x^2 + 13xy - 30y^2 \end{aligned}$$

$$\begin{aligned} \text{vii) } & x+9y \text{ and } x-15y \\ & = (x+9y)(x-15y) \\ & = x(x-15y) + 9y(x-15y) \\ & = x^2 - 15xy + 9xy - 135y^2 \\ & = x^2 - 6xy - 135y^2 \end{aligned}$$

Ex - 19 (D)

2) Simplify.

$$i) 2x^5 \div x^2 = \frac{2x^5}{x^2} = 2x^{5-2} = 2x^3$$

$$ii) 6a^8 \div 3a^3 = \frac{6a^8}{3a^3} = 2a^{8-3} = 2a^5$$

$$iii) 20xy \div -5xy = \frac{20xy}{-5xy} = \frac{20}{-5} = -4$$

$$iv) -24a^2b^2c^2 \div 6ab = \frac{-24a^2b^2c^2}{6ab} = \frac{24 \times a \times a \times b \times b \times c \times c}{6 \times a \times b} = -4abc$$

~~$$v) -5x^2y \div xy^2 = \frac{-5x^2y}{xy^2} = \frac{-5x^2 \times y}{1 \times x \times y^2} = -\frac{5x}{y}$$~~

$$v) -5x^2y \div xy^2 = \frac{-5x^2y}{xy^2} = \frac{-5 \times x \times x \times y}{x \times y \times y} = -\frac{5x}{y}$$

$$vi) 10p^3q^4r^5 \div 10p^3q = \frac{10p^3q^4r^5}{10p^3q} = 4q^3r^5$$

$$vii) -64x^4y^3z \div 4x^3y^2z = \frac{-64x^4y^3z}{4x^3y^2z} = -16xy$$

$$viii) 35xy^5 \div 7xy^4 = \frac{35xy^5}{7xy^4} = 5y$$

3) Divide

$$i) -15p^6q^8 \text{ by } -5p^6q^7 = \frac{-15p^6q^8}{-5p^6q^7} = 3q$$

iii) $\frac{-21m^5n^7}{14m^2n^2} = \frac{-21m^5n^7}{14m^2n^2} = \frac{-3m^3n^5}{2}$

iv) $\frac{36a^4x^5y^6}{4x^2a^3y^2} = \frac{36a^4x^5y^6}{4x^2a^3y^2} = 9a^1x^3y^4$

v) $\frac{20x^3a^6}{5xy} = \frac{20x^3a^6}{5xy} = 4x^2a^6/y$

vi) $\frac{28a^2b^3}{c^2} \div 4abc = \frac{28a^2b^3}{c^2} \times \frac{1}{4abc} = \frac{28a^2b^3}{4abc^3} = \frac{7ab^2}{c^3} = 7ab^2c^{-3}$

vii) $\frac{2a^2}{ab^2} \div \frac{3b}{2a} = \frac{2a^2}{ab^2} \times \frac{2a}{3b} = \frac{4a^3}{3b^3}$

viii) $\frac{-5.5x^2}{y} \div \frac{11x}{y} = \frac{-5.5x^2}{y} \times \frac{y}{11x} = \frac{-5.5x}{11x} = -0.5$

ix) $\frac{61x^2y^2}{z^2} \div \frac{8xy}{z} = \frac{61x^2y^2}{z^2} \times \frac{z}{8xy} = \frac{61xy}{z}$

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x