

$$(vi) \frac{ax}{y} = \frac{a}{y}$$

HW-6-10-2021

Math homework Swarit Nath 6B

Ex 19C

2. Fill in the blanks.

- (i) $4x \times 6x \times 2 = 24x^2 \times 2 = 48x^2$
- (ii) $3ab \times 6a^2 = 18a^2 b$
- (iii) $x \times 2x^2 \times 3x^3 = 6x^6$
- (iv) $5 \times 5x^3 = 25x^3$
- (v) $6 \times 6x^2 \times 6x^2y^2 = 216x^4y^2$
- (vi) $-8x \times -3x = 24x^2$
- (vii) $-5x \times -3x \times 5x^2 = 75x^3$
- (viii) $8x \times -4x^2 \times 3x^3y^2 = 96x^4y^2$
- (ix) $-4x \times 5xy \times 3z = -60x^2yz$
- (x) $5x \times 2x^2y \times -7y^3 \times 2x^3y^2 = -140x^6y^6$

3. Find the value of:

- (i) $3x^3 \times 5x^4 = 15x^7$ (ii) ~~$3ab$~~ $5a^2 \times 7a^7 = 35a^9$
- (iii) $3abc \times 6ac^3 = 18a^2bc^4$ (iv) $a^2b^2 \times 5a^3b^4 = 5a^5b^6$
- (v) $2x^2y^3 \times 5x^2y^4 = 10x^4y^7$ (vi) $abc \times bcd = abc^2d$

7. Multiply.

- (i) $x + 2x \quad x + 10 = 2x^2 + 20$
- (ii) $(x+5)(x-3)$
 $= x \times x + x \times 5 + 5 \times x - 5 \times 3$
 $= x^2 + 5x + 5x - 15$
 $= x^2 + 10x - 15$

$$(x+5) \times (x-3)$$

$$\Rightarrow x \times x + x \times -3 + 5 \times x - 5 \times 3$$

$$\Rightarrow x^2 - 3x + 5x - 15$$

$$\Rightarrow x^2 + 2x - 15$$

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

$$\Rightarrow (x-5) \times (x+3)$$

$$\Rightarrow x \times x + x \times 3 - 5 \times x - 5 \times 3$$

$$\Rightarrow x^2 + 3x - 5x - 15$$

$$\Rightarrow x^2 - 2x - 15$$

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

$$\Rightarrow x \times x - x \times 3 - 5 \times x - 5 \times -3$$

$$\Rightarrow x^2 - 3x - 5x + 15$$

$$\Rightarrow x^2 - 8x + 15$$

(v) $(2x+y) \times (x+3y)$

$$\Rightarrow 2x \times x + 2x \times 3y + y \times x + y \times 3y$$

$$\Rightarrow 2x^2 + 6xy + yx + 3y^2$$

$$\Rightarrow 2x^2 + 7xy + 3y^2$$

(vi) $(3x-5y) \times (x+6y)$

$$\Rightarrow 3x \times x + 3x \times 6y - 5y \times x - 5y \times 6y$$

$$\Rightarrow 3x^2 + 18xy - 5yx - 30y^2$$

$$\Rightarrow 3x^2 + 13xy - 30y^2$$

(vii) $(x+9y)(x-5y)$
 $\Rightarrow x \times x + x \times -5y + 9y \times x + 9y \times -5y$
 $\Rightarrow x^2 + -5xy + 9yx + -45y^2$
 $\Rightarrow x^2 + 4xy - 45y^2$

(viii) $(2x+5y)(2x+5y)$
 $\Rightarrow 2x \times 2x + 2x \times 5y + 5y \times 2x + 5y \times 5y$
 $\Rightarrow 4x^2 + 10xy + 10xy + 25y^2$
 $\Rightarrow 4x^2 + 20xy + 25y^2$

Ex 19(D)

2. Simplify

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

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

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

(iv) $\frac{-24a^2b^3c^2}{8ab} = -4abc^2$

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

(vi) $\frac{40p^3q^4r^5}{10p^2q^2} = 4p^1q^2r^5$

$$(vii) \frac{-64x^4y^8z}{4x^8y^2z} = -16xy$$

$$(viii) \frac{35xy}{7xy} = 5xy$$

3. Divide:-

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

$$\frac{-3m}{4} \div \frac{2m}{1}$$

$$= \frac{-3m}{4} \times \frac{1}{2m} = \frac{-3m}{8m} = \frac{-3}{8}$$

$$(ii) \frac{-5p^6q^8}{-5p^6q^7} = 3q$$

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

$$(iv) \frac{36x^4y^5z}{4x^2y^2z} = 9x^2y^3z$$

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

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

$$= \frac{28a^2b^3}{4abc^3} = \frac{7ab^2}{c^3}$$

$$(vi) \frac{2a^2}{9b^2} \times \frac{2a}{3b} = \frac{4a^3}{27b^3} = \frac{4a^3}{27b^3}$$

$$(vii) \frac{-5.5x^2}{y} \times \frac{y}{11x} = \frac{-5.5}{11} \times \frac{x^2}{x} \times \frac{y}{y}$$
$$= \frac{-5.5}{11} \times x$$
$$= \frac{-1}{2} = -\frac{x}{2}$$

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