EXERCISE 19(A)

Fill in the blanks :

(i) $5 + 4 =$ 9 and $5x + 4x =$ 9x

(ii) $12 + 18 =$ 30 and $12x^2y + 18x^2y =$ $3x^2y$

(iii) $7 + 16 =$ 23 and $7a + 16b =$ 7a + 16b

(iv) $1 + 3 =$ 4 and $x^2y + 3xy^2 =$ $x^2y + 3xy^2$

(v) $7 - 4 =$ 3 and $7ab - 4ab =$ 3ab

(vi) $12 - 5 =$ 7 and $12x - 5y =$ 12x − 5y

(vii) $35 - 16 =$ 19 and $35ab - 16ba =$ 19ab

(viii) $28 - 13 =$ 15 and $28ax^2 - 13a^2x =$ $28ax^2 - 13a^2x$

2. i) The sum of (-2) and (-5) (-7) and the sum of -2x and

-5x = -7x

ii) The sum of 8 and -3 = 5 and the sum of 8ab and -3

= 5ab.

iii) The sum of -15 and -4 = -19 and the sum of -15x

and -4y = (-15x) + (-4y).

iv) 15+8+3 = 26 and 15x+8y+3x = 18x+8y.

v) 12-9+15 = 18 and 12ab-9ab+15ba = 18ab

vi) 25-7-9 = 9 and 25xy-7xy-9yx = 9xy.

vii) -4-6-5 = -15 and -4ax-6ax-5ay = (-10ax-5ay.

3. i) 8xy + 3xy

= (8+3)xy

= 11xy

ii) $2xy^2 + xy^2 + 6xyz$

$= (2+1+6)xy^2$

$= 9xy^2$

iii) $2a + 3a + 4b$

$= (2+3)a + 4b$

$= 5a + 4b.$

iv) $3x + 2y.$

v) $5m + 3n + 4p$

vi) $6a + 3a + 9ab$

$= (6+3)a + 9ab$

$= 9a + 9ab.$

vii) ~~$3p + 4q +$~~ $3p + 4q + 9q$

$= 3p + (4+9)q$

$= 3p + 13q$

viii) $5ab + 4ba + 6b$

$= (5+4)ab + 6b$

$= 9ab + 6b.$

ix) $50pq + 30pq + 10pr$

$= (50+30)pq + 10pr$

$= 80pq + 10pr$

x) $(-2y)+(-y)+(3y)$
$=((-2)+(-1)+(-3))y$
$=-6y$

xi) $(-3b)+(-b)$
$=-4b$

xii) $5b+(-4b)+(-10b)$
$=-9b$

xiii) $-2c+(-c)+(-5c)$
$=-8c$

4. Evaluate:

i) $6a-a-5a-2a$
$=6a-1a-5a-2a$
$=(6-1-5-2)a$
$=(-2)a$

ii) $2b-3b-b+4b$
$=(2-3-1+4)b$
$=(2-1-3+4)b$
$=2b$

iii) $3x-2x-4x+7x$
$=4y$

iv) $5ab+2ab-6ab+ab$
$=2ab$

v) $8x-5y-3x+10y$
$=(8x-3x)+(-5y+10y)$

$= 5x + 5y$

5. i) $-7x + 9x + 2x - 2x$

$2x$

ii) $5ab - 2ab - 8ab + 6ab$

$= ab$

iii) $-8a - 3a + 12a + 13a - 6a$

$= 8a$

iv) $19abc - 11abc - 12abc + 14abc$

$= 10abc$

6. i) $6ba - 4ab$

$= 2ab$

ii) $6.8b - 4.8b$

$= (6.8 - 4.8)b$

$= 2b$

iii) $10.5abc - 3.5abc$

$= (10.5 - 3.5)abc$

$= 7abc$

iv) $8\frac{1}{2}nm - 3\frac{1}{2}mn$

$= 5mn$

7. i) $2a^2b^2 + 5ab^2 + 8a^2b^2 - 3ab^2$

$= (2a^2b^2 + 8a^2b^2) + (5ab^2 + (-3ab^2))$

$= 10a^2b^2 - 2ab^2$

ii) $4a + 3b - 2a - b$

$= (4a + (-2a)) + (3b - b)$

$= 2a + 2b$

iii) $2xy + 4yz + 5xy + 3yz - 6xy$

$= (2xy + 5xy - 6xy) + (4yz + 3yz)$

$= 1xy + 7yz$

iv) $ab + 15ab - 11ab - 2ab$

$= 3ab$

v) $6a^2 - 3b^2 + 2a^2 + 5b^2 - 4a^2$

$= 4a^2 + 2b^2$

vi) $8abc + 2ab - 4abc + ab$

$= 4abc - 3ab$

vii) $9xyz + 15xyz - 10zyx - 2zxy$

$12xyz$

viii) $13pqr + 2p + 4q - 6pqr + 5pqr$

$2p + 4q + 12pqr$

ix) $4ab + 0 - 2ba$

$= 2ab$

x) $6x^2y - 2xy^2 + 5x^2y - xy^2$

$= 11x^2y - 3xy^2$

Debasmita Mohanty

28-7-21