HW
26/7/21

Date
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Exercise-19 (A)

① Fill in the blanks :-

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

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

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 Fill in the blanks :-

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 $-3ab =$ $5ab$.

iii) The sum of -15 and $-4 =$ -19 and
the sum of $-15x$ and $-4y =$ $(-15x) + (-4y)$.

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

v) $12 - 9 + 15 =$ $12 + 15 - 9 = 27 - 9 = 18$ and
$12ab - 9ab + 15ba =$ $12ab + 15ba - 9ab = 27ab - 9ab = 18ab.$

vi) $25 - 7 - 9 =$ $18 - 9 = 9$ and $25xy - 7xy - 9yx$
$= 18xy - 9yx = 9xy$

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

(3) Add:

i) $8xy$ and $3xy$

$8xy + 3xy = 11xy$ (Ans)

ii) $2xyz$, xyz and $6xyz$

$2xyz + xyz + 6xyz = 2xyz + 1xyz + 6xyz$
$= 9xyz$ (Ans)

iii) $2a$, $3a$, and $4b$

$2a + 3a + 4b = 5a + 4b$ (Ans)

iv) $3x$ and $2y$

$3x + 2y$ (Ans)

v) 5m, 3n and 4p

$5m + 3n + 4p$ (Ans)

vi) 6a, 3a and 9ab.

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

vii) 3p, 4q and 9q

$3p + 4q + 9q = 3p + 13q$ (Ans)

viii) 5ab, 4ba and 6b

$5ab + 4ba + 6b = 9ab + 6b$ (Ans)

ix) 50pq, 30pq and 10pr

$50pq + 30pq + 10pr = 80pq + 10pr$ (Ans)

x) $-2y$, $-y$ and $-3y$

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

xi) $-3b$ and $-b$

$(-3b) + (-b) = (-3b) + (-1b)$
$= -4b$ (Ans)

iii) $5b, -4b$ and $-10b$

$$5b+(-4b)+(-10b) = 5b+(-14b)$$
$$= 5b-14b$$
$$= -9b \text{ (Ans)}$$

iv) $-2c, -c$ and $-5c$

$$(-2c)+(-c)+(-5c)$$
$$=(-2c)+(-1c)+(-5c)$$
$$= -8c \text{ (Ans)}$$

(4) Evaluate:

i) $6a - a - 5a - 2a$
$= 6a - 1a - 5a - 2a$
$= 6a - 8a$
$= -2a$

ii) $2b - 3b - b + 4b$
$= 2b + 4b - 3b - 1b$
$= 6b - 4b$
$= 2b$

iii) $3x - 2x - 4x + 7x$
$= 3x + 7x - 2x - 4x$
$= 10x - 6x$
$= 4x$

iv) $5ab + 2ab - 6ab + ab$
$= 5ab + 2ab + 1ab - 6ab$
$= 8ab - 6ab$
$= 2ab$

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

(5) Evaluate :-

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

$= 9x + 2x - 7x - 2x$

$= 11x - 9x$

$= 2x$

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

$= 5ab + 6ab - 2ab - 8ab$

$= 11ab - 10ab$

$= 1ab.$

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

$= 12a + 13a - 8a - 3a - 6a$

$= 25a - 17a$

$= 8a.$

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

$= 19abc + 14abc - 11abc - 12abc$

$= 33abc - 23abc$

$= 10abc$

(6) Subtract the first term from the second :-

i) $4ab, 6ba$

$6ba - 4ab = 6ab - 4ab$

$= 2ab.$

ii) $4.8b, 6.8b.$

$6.8b - 4.8b$

$= 2b$

iii) $3.5abc, 10.5abc$

$10.5abc - 3.5abc$

$= 7abc$

iv) $3\frac{1}{2}$ mm, $8\frac{1}{2}$ mm

$8\frac{1}{2}$ mm $- 3\frac{1}{2}$ mm

$= 8\frac{1}{2}$ mm $- 3\frac{1}{2}$ mm

$= 5$ mm

(7) Simplify :-

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

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

$= 10a^2b^2 + 3ab^2$ (Ans)

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

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

$= 2a + (3b - 1b)$

$= 2a + 2b$. (Ans)

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

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

$= (7xy - 6xy) + 7yz$

$= 1xy + 7yz$

$= xy + 7yz$

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

$= (1ab + 15ab) + (-11ab - 2ab)$

$= 16ab + (-13ab)$

$= 16ab - 13ab$

$= 3ab$

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

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

$= (8a^2 - 4a^2) + (2b^2)$

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

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

$= (8abc - 4abc) + (2ab + 1ab)$

$= 4abc + 3ab.$

vii) $9xyz + 15yxz - 10zyx - 2xzy$

$= 9xyz + 15xyz - 10xyz - 2xyz$

$= 24xyz - 12xyz$

$= 12xyz.$

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

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

$= (18pqr - 6pqr) + 2p + 4q$

$= 12pqr + 2p + 4q$

ix) $4ab + 0 - 2ba$

$= (4ab - 2ba) + 0$

$= 2ab + 0$

$= 2ab$

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

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

$= 11x^2y + (-2xy^2 - 1xy^2)$

$= 11x^2y + (-3xy^2)$

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