HW

# Ex- 19(A)

1. 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. 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 $15x + 8y + 3x = 18x + 8y$

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

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

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

3. i) $8xy$ and $3xy = 11xy$

ii) $2xyz$, $xyz$ and $6xyz = 2xyz + xyz + 6xyz = 3xyz + 6xyz$
$= 9xyz$

iii) $2a$, $3a$ and $4b =$
$= 2a + 3a + 4b$
$= 5a + 4b$

iv) $3x$ and $2y = 3x + 2y$

v) $5m$, $3n$ and $4p = 5m + 3n + 4p$

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

vii) $3p, 4q$ and $9q = 3p + 4q + 9q = 3p + 13q$

viii) $5ab, 4ba$ and $6b = 5ab + 4ba + 6b = 9ab + 6b$

ix) $50pq, 30pq$ and $10pr = 50pq + 30pq + 10pr = 80pq + 10pr$

x) $-2y, -y$ and $-3y = -2y + (-y) + (-3y)$
$= -2y - y - 3y$
$= -3y - 3y$
$= -6y$

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

xii) $5b - 4b$ and $-10b = 5b + (-4b) + (-10b)$
$= 5b - 4b - 10b$
$= -14b + 5b = -9b$

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

(4) i) $6a - a - 5a - 2a$
$= 6a - a - 5a - 2a = 6a - 8a = -2a$

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

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

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

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

(5) i.) $-7x+9x+2x-2x = -7x-2x+9x+2x = -9x+11x = 2x$

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.) $19abc-11abc-12abc+14abc = 14abc+19abc-11abc-12abc =$
$33abc-23abc = 10abc$

(6) i.) $6ba-4ab = 2ba$

ii.) ~~4.8b~~ $6.8b-4.8b = 2b$

iii.) $10.5abc-3.5abc = 7abc$

iv.) ~~$3\frac{1}{2}mn$~~ $8\frac{1}{2}mn-3\frac{1}{2}mn = \frac{17}{2}mn-\frac{7}{2}mn = \frac{10}{2}mn = 5mn$

(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) $2xy + 4yz + 5xy + 3yz - 6xy$
$= 2xy + 5xy - 6xy + 4yz + 3yz$
$= xy + 7yz$

iv) $ab + 15ab - 11ab - 2ab$
$= ab + 15ab - 11ab - 2ab$
$= 16ab - 13ab$
$= 3ab$

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

vi) $8abc + 2ab - 4abc + ab$
$= 8abc - 4abc + 2ab + ab$
$= 4abc + 3ab$

vii) $9xyz + 15yxz - 10zyx - 2zxy$
~~$= 9xyz +$~~
$= 24xyz - 12xyz$
$= 12xyz$

viii) $13pqr + 2p + 4q - 6pqr + 5pqr$
$= 13pqr + 5pqr - 6pqr + 2p + 4q$
$= 12pqr + 2p + 4q$

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

x) $6x^2y - 2xy^2 + 5x^2y - xy^2$
$= 6x^2y + 5x^2y - 2xy^2 - xy^2$
$= 11x^2y - 3xy^2$