

subtraction also remain same

Exercise: 19(A)

1. Fill in the blanks.

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

and

$$5x + 4x = 9x$$

$$12 + 18 = 30$$

and

$$12x^2y + 18x^2y = 30x^2y$$

$$7 + 16 = 23$$

and

$$7a + 16b = 7a + 16b$$

$$1 + 3 = 4$$

and

$$x^2y + 3xy^2 = x^2y + 3xy^2$$

$$7 - 4 = 3$$

and

$$7ab - 4ab = 3ab$$

$$12 - 5 = 7$$

and

$$12x - 5y = 12x - 5y$$

$$35 - 16 = 19$$

and

$$35ab - 16ba = 35ab - 16ba$$

$$28 - 13 = 15$$

and

$$28a^2x - 13a^2x = 28a^2x - 13a^2x$$

2. Fill in the blanks:

i. The sum of -2 and $-5 = -7$ and the sum of $-20x$ 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 the sum of $15x + 8y + 3x = 18x + 8y$

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

vi. $25 - 7 - 9 = 9$ and $25xy - 7xy - 9xy = 9xy$

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

3. Add:

i. $8xy$ and $3xy: 8xy + 3xy = 11xy$

ii. $2xyz$, xyz and $6xyz: 2xyz + xyz + 6xyz = 9xyz$

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. $6a$, $3a$ and $4b: 6a + 3a + 4b = 9a + 4b$

vii. $-2y$, $-y$ and $-3y: -2y + (-y) + (-3y) = -6y$

viii. $-3b$ and $-b: -3b + (-b) = -4b$

ix. $5b$, $-4b$ and $-10b: 5b + (-4b) + (-10b) = -9b$

x. $-2c$, $-c$ and $-5c: -2c + (-c) + (-5c) = -8c$

xi. $3p$, $4q$ and $9q: 3p + 4q + 9q = 3p + 13q$

xii. $5ab$, $4ba$ and $6b: 5ab + 4ba + 6b = 9ab + 6b$

xiii. $50pq$, $30pq$ and $10pr: 50pq + 30pq + 10pr = 80pq + 10pr$

4. Evaluate.

$$4ab, 6ba$$

$$4.8b, 6.8b$$

$$3.5abc, 10.5abc$$

$$3\frac{1}{2}mn, 8\frac{1}{2}mn$$

4. Evaluate:

i) $6a - a - 5a - 2a$

Solⁿ: $= 6a - 5a - 2a$
 $= 5a - 2a$

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

Solⁿ: $= 2b - 3b - b + 4b$
 $= -2b + 4b = 2b$

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

Solⁿ: $= x - 4x + 7x$
 $= -3x + 7x$
 $= 4x$

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

Solⁿ: $= 7ab - 6ab + ab$
 $= ab + ab$
 $= 2ab$

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

Solⁿ: $= 8x - 3x - 5y + 10y$
 $= 5x + 5y$

5. Evaluate

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

Solⁿ: $= -7x + 9x + 2x - 2x$
 $= 2x$

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

Solⁿ: $= 3ab - 8ab + 6ab$
 $= 3ab - 2ab$
 $= ab$

ii) $-8a - 3a + 12a + 3a - 6a$
 Solⁿ: $= 11a + 25a - 6a$
 $= 14a - 6a$
 $= 8a$

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

Solⁿ: $= 8abc + 2abc$
 $= 10abc$

6. Subtract the first term from the second:

i) $4ab, 6ba$

Solⁿ: $6ab - 4ab = 6ab - 4ab$
 $= 2ab$

ii) $4.8b, 6.8b$

Solⁿ: $= 6.8b - 4.8b$
 $= 2b$

iii) $3.5abc, 10.5abc$

Solⁿ: $= 10.5abc - 3.5abc$
 $= 7abc$

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

Solⁿ: $= 8\frac{1}{2}mn - 3\frac{1}{2}mn$
 $= \frac{17}{2}mn - \frac{7}{2}mn$
 $= \frac{17mn - 7mn}{2} = \frac{10mn}{2} = 5mn$

7. Simplify

i) $2a^2b^2 + 5a^2b^2 + 8a^2b^2 - 3ab^2$
 Solⁿ: $2a^2b^2 + 8a^2b^2 + 5ab^2 - 3ab^2$
 $= 10a^2b^2 + 2ab^2$

ii) $4a + 3b - 2a - b$
 Solⁿ: $= 4a - 2a + 3b - b$
 $= 2a + 2b$

iii) $2xy + 4yz + 5xy + 3yz - 6xy$
 Solⁿ: $= 2xy + 5xy - 6xy + 4yz + 3yz$
 $= 7xy - 6xy + 4yz + 3yz$
 $= xy + 7yz$

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

v) $6a^2 - 3b^2 + 2a^2 + 5b^2 - 4a^2$
 Solⁿ: $= 6a^2 + 2a^2 - 4a^2 - 3b^2 + 5b^2$
 $= 8a^2 - 4a^2 - 3b^2 + 5b^2$
 $= 4a^2 + 2b^2$

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

vii) $9xyz + 15yxz - 10zyx - 2zxy$
 Solⁿ: $= 9xyz - 10xyz - 2xyz$
 $= 14xy - 2xyz$
 $= -12xyz$

viii) $13pqr + 2p + 4q - 6pqr + 5pqr$
 Solⁿ: $= 13pqr - 6pqr + 5pqr + 2p + 4q$
 $= 7pqr + 5pqr + 2p + 4q$
 $= 12pqr + 2p + 4q$
 $= 12pqr + 6p$

ix) $4ab + 0 - 2ba$

Solⁿ: $= 4ab - 2ab$
 $= 2ab$

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

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