

Exercise 19 (A)

1. Fill in the blanks.

i) $5+4 = \underline{9}$ and $5x+4x = \underline{9x}$

ii) $12+18 = \underline{30}$ and $12x^2y+18x^2y = \underline{30x^2y}$

iii) $7+16 = \underline{23}$ and $7a+16b = \underline{7a+16b}$

iv) $1+3 = \underline{4}$ and $x^2y + \cancel{2x^2}^2 3xy^2 = x^2y + 3xy^2$

v) $7-4 = \underline{3}$ and $7ab-4ab = \underline{3ab}$

vi) $12-5 = \underline{7}$ and $\cancel{7ab} 12x-5y = \frac{12x-5y}{19ab}$

vii) $35-16 = \underline{19}$ and $35ab-16ba = \frac{35ab-16ba}{15a^2x}$

viii) $28-13 = \underline{15}$ and $28ax^2-13a^2x = \frac{28ax^2-13a^2x}{15a^2x}$

2. Fill in the blanks.

i) The sum of -2 and $-5 = \underline{-7}$ and the sum of $-2x$ and $-5x = \underline{-7x}$

ii) The sum of 8 and $-3 = \underline{5}$ and the sum of $8ab$ and $-3ab = \underline{5ab}$

iii) The sum of -15 and $-4 = \underline{-19}$ and the sum of $-15x$ and $-4y = \underline{-15x-4y}$
the sum of

iv) $15+8+3 = \underline{26}$ and $15x+8y+3x = \underline{18x+8y}$

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

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

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

3. Add:

i) $8xy$ and $3xy$

Ans $\rightarrow 8xy + 3xy = 11xy$

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

Ans $\rightarrow 2xyz + xyz + 6xyz = 2xyz + 1xyz + 6xyz$
 $= 9xyz$

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

Ans $\rightarrow 2a + 3a + 4b = 5a + 4b$

iv) $3x$ and $2y$

Ans $\rightarrow 3x + 2y = 3x + 2y$

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

Ans $\rightarrow 5m + 3n + 4p = 5m + 3n + 4p$

vi) $6a$, $3a$ and $9ab$

Ans $\rightarrow 6a + 3a + 9ab = 9a + 9ab$

vii) $3p$, $4q$ and $9q$

$$\text{Ans} \rightarrow 3p + 4q + 9q = 3p + 13q$$

viii) $5ab$, $4ba$ and $6b$

$$\text{Ans} \rightarrow 5ab + 4ba + 6b = 9ab + 6b$$

ix) $50pq$, $30pq$ and $10pf$

$$\text{Ans} \rightarrow 50pq + 30pq + 10pf = 80pq + 10pf$$

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

$$\begin{aligned} \text{Ans} \rightarrow -2y + -y + -3y &= -2y - 1y - 3y \\ &= -2y - 1y - 3y \\ &= -6y \end{aligned}$$

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

$$\begin{aligned} \text{Ans} \rightarrow -3b + -b &= -3b - 1b \\ &= -3b - 1b \\ &= -4b \end{aligned}$$

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

$$\begin{aligned} \text{Ans} \rightarrow 5b + -4b + -10b &= 5b - 4b - 10b \\ &= -9b \end{aligned}$$

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

Ans $\rightarrow -2c - c + -5c = -2c - 1c + -5c$
 $= -2c - 1c - 5c$
 $= -8c$

4. Evaluate:

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

Ans $\rightarrow 6a - a - 5a - 2a = 6a - 1a - 5a - 2a$
 $= -2a$

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

Ans $\rightarrow 2b - 3b - b + 4b = 2b - 3b - 1b + 4b$
 $= 2b$

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

Ans $\rightarrow 3x - 2x - 4x + 7x = 4x$

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

Ans $\rightarrow 5ab + 2ab - 6ab + ab = 5ab + 2ab - 6ab + 1ab$
 $= 2ab$

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

Ans $\rightarrow 8x - 5y - 3x + 10y = 8x - 3x - 5y + 10y$
 $= 5x + 10y - 5y$
 $= 5x + 5y$

5. Evaluate:

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

Ans $\Rightarrow -7x + 9x + 2x - 2x = 2x$

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

Ans $\Rightarrow 5ab + 6ab - 2ab - 8ab =$
 $= 11ab - 2ab - 8ab$
 $= 11ab - 10ab$
 $= 1ab$

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

Ans $\Rightarrow -8a - 3a + 12a + 13a - 6a$
 $= 12a + 13a - 8a - 3a - 6a$
 $= 25a - (8a + 3a + 6a)$
 $= 25a - 17a$
 $= 8a$

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

Ans $\Rightarrow 19abc - 11abc - 12abc + 14abc$
 ~~$= 19abc$~~
 $= 19abc + 14abc - 11abc - 12abc$
 $= 33abc - (11abc + 12abc)$
 $= 33abc - 23abc$
 $= 10abc$