

EXERCISE 2.3

1) Add the following using expanded form :-

A:- $915 + 1787$

Sol:-

Th	H	T	O	
	9	1	5	-> $900 + 10 + 5$
1	7	9	7	-> $+1000 + 700 + 80 + 7$
				$1000 + 1600 + 90 + 12$
				$1000 + 1000 + 600 + 90 + 10 + 2$
				$2000 + 600 + 100 + 2$
				$2000 + 700 + 2 \Rightarrow 2702$

B:- $8057 + 1873$

Sol:-

Th	H	T	O	
	8	0	5	7 -> $8000 + 000 + 50 + 7$
1	8	7	3	-> $+1000 + 800 + 70 + 3$
				$9000 + 800 + 120 + 10$
				$9000 + 800 + 100 + 20 + 10$
				$9000 + 900 + 30 \Rightarrow 9930$

C:- $1357 + 2785$

Sol:-

Th	H	T	O	
	1	3	5	7 -> $1000 + 300 + 50 + 7$
2	7	8	5	-> $+2000 + 700 + 80 + 5$
				$3000 + 1000 + 130 + 12$
				$4000 + 100 + 30 + 10 + 2$
				$4000 + 100 + 40 + 2 \Rightarrow 4142$

D:- $4376 + 2815$

Sol:-

Th	H	T	O	
	4	3	7	6 -> $4000 + 300 + 70 + 6$
2	8	1	5	-> $+2000 + 800 + 10 + 5$
				$6000 + 1100 + 80 + 11$
				$6000 + 1000 + 100 + 80 + 10 + 1$
				$7000 + 100 + 90 + 1 \Rightarrow 7191$

2) Solve the following problems :-

A:- Rahul brought a water cooler for Rs. 3475 and a television for Rs. 4197. How much he spend in all ?

Sol:-

Rahul brought water cooler for	=	Rs 3 4 7 5
Rahul brought television for	= +	Rs 4 1 9 7
He spend in all	=	<u>Rs. 7 6 7 2</u>

B:- There are 3721 teak trees and 6253 rosewood trees in a forest. How many trees are there in all ?

Sol:-

Number of teak trees.	=	3 7 2 1
Number of rosewood trees =	= +	<u>6 2 5 3</u>
Total numbers of trees	=	<u>9 9 7 4</u>

C:- There are 6353 people in village A and 2346 in village B. What is the total population of village A and B ? Find an estimate population and compare it with the actual population.

Sol:-

people in village A	=	6 3 5 3
People in village B	= +	<u>2 3 4 6</u>
Total no. of people in village	=	8 6 9 9

Actual population = 8 6 9 9

Here, $9 > 5$ and $90 < 99 < 100$

∴ Estimated population of village A and B is = 8 7 0 0

So, $8699 < 8700$

3) Find the estimated sum and compare it with the actual sum.

A:- $245 + 262$

Sol:-

2	4	5	→	2	5	0
				4	0	← 45 → 50

2	6	2	→	2	6	0
				6	0	← 62 → 70

Actual sum	Estimated sum
<u>2 4 5</u>	<u>2 5 0</u>
<u>+ 2 6 2</u>	<u>+ 2 6 0</u>
<u>5 0 7</u>	<u>5 1 0</u>

So, $507 < 510$

B:- $536 + 675$

Sol:- $5 \ 3 \ 6 \xrightarrow[3 \ 0 \leftarrow 3 \ 6 \rightarrow 4 \ 0]{6 \ > \ 5} 5 \ 4 \ 0$

$6 \ 7 \ 5 \xrightarrow[7 \ 0 \leftarrow 7 \ 5 \rightarrow 8 \ 0]{5 \ = \ 5} 6 \ 8 \ 0$

Actual sum	Estimated sum
$\begin{array}{r} 5 \ 3 \ 6 \\ + 6 \ 7 \ 5 \\ \hline 12 \ 1 \ 1 \end{array}$	$\begin{array}{r} 5 \ 4 \ 0 \\ + 6 \ 8 \ 0 \\ \hline 12 \ 2 \ 0 \end{array}$
So, $12 \ 1 \ 1 < 12 \ 2 \ 0$	

C:- $1 \ 3 \ 5 \ 7 + 7 \ 5 \ 8 \ 6$

Sol:- $1 \ 3 \ 5 \ 7 \xrightarrow[5 \ 0 \leftarrow 5 \ 7 \rightarrow 6 \ 0]{7 \ > \ 5} 1 \ 3 \ 6 \ 0$

$7 \ 5 \ 8 \ 6 \xrightarrow[8 \ 0 \leftarrow 5 \ 7 \rightarrow 9 \ 0]{6 \ > \ 5} 7 \ 5 \ 9 \ 0$

Actual sum	Estimated sum
$\begin{array}{r} 1 \ 3 \ 5 \ 7 \\ + 7 \ 5 \ 8 \ 6 \\ \hline 8 \ 9 \ 4 \ 3 \end{array}$	$\begin{array}{r} 1 \ 3 \ 6 \ 0 \\ + 7 \ 5 \ 9 \ 0 \\ \hline 8 \ 9 \ 5 \ 0 \end{array}$
So, $8 \ 9 \ 4 \ 3 < 8 \ 9 \ 5 \ 0$	