EXERCISE 2.3

1) **Add the following using expanded form :-**

A:- 9 1 5 + 1 7 8 7

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   => 2 7 0 2

B:- 8 0 5 7 + 1 8 7 3

Sol:- Th   H   T   O

8   0   5   7   ->   8 0 0 0 + 0 0 0 + 5 0 + 7

1   8   7   3   -> + <u>1 0 0 0 + 8 0 0 + 7 0 + 3</u>

9 0 0 0 + 8 0 0 + 1 2 0 + 1 0

9 0 0 0 + <u>8 0 0 + 1 0 0</u> + <u>2 0 + 1 0</u>

9 0 0 0 + 9 0 0 + 3 0   => <u>9 9 3 0</u>

C:- 1 3 5 7 + 2 7 8 5

Sol:- TH   H   T   O

1   3   5   7   ->   1 0 0 0 + 3 0 0 + 5 0 + 7

2   7   8   5   -> + <u>2 0 0 0 + 7 0 0 + 8 0 + 5</u>

<u>3 0 0 0 + 1 0 0 0</u> + 1 3 0 + 12

4 0 0 0 + 1 0 0 + 3 0 + 1 0 + 2

4 0 0 0 + 1 0 0 + 4 0 + 2   =>   4 1 4 2

D:- 4 3 7 6 + 2 8 1 5

Sol:- TH   H   T   O

4   3   7   6   ->   4 0 0 0 + 3 0 0 + 7 0 + 6

2   8   1   5   -> + 2 0 0 0 + 8 0 0 + 1 0 + 5

6 0 0 0 + 1 1 0 0 + 8 0 + 1 1

6 0 0 0 + 1 0 0 0 + 1 0 0 + 8 0 + 1 0 + 1

7 0 0 0 + 1 0 0 + 9 0 + 1   =>   7 1 9 1

2) Solve the following problems. :-

A:- Rahul brought a water cooler for Rs. 3 4 7 5 and a television for Rs. 4 1 9 7 . 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 = Rs. 7 6 7 2

B:- There are 3 7 2 1 teek trees and 6 2 5 3 rosewood trees in a forest . How many trees are there in all ?

Sol:- Number of teek trees. = 3 7 2 1

Number of rosewood trees = + 6 2 5 3

Total numbers of trees   =

9   9   7   4

C:- There are 6 3 5 3 people in village A and

2 3 4 6 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   = +
2   3   4   6

Total no. of people in village   =
8   6   9   9

Actual population =   8   6   9   9

Here , 9 > 5   and   9 0

<--------- 9 9 -> 1 0 0

 .°. , Estimated population of village A and B is

=   8 7   0   0

So ,   8 6 9 9   <   8 7 0   0

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

A:- 2 4 5   + 2 6 2

                    5   =
5

**Sol:- 2   4   5   ——————————
>   2   5   0**

                              4 0 <— 45 —>
5 0

                                 2   <
5

      **2   6   2 ——————————
>   2   6   0**

                              6 0 <— 6 2 —>
7 0

          <u>**Actual sum**</u>
<u>**Estimated sum**</u>

          2   4   5
2   5   0

      <u>**+ 2   6   2**</u>
<u>**+ 2   6   0**</u>

          <u>**5   0   7**</u>
<u>**5   1   0**</u>

                    So , 5 0 7 < 5
   1   0

B:- 5   3   6   +   6   7   5

Sol:- 5   3   6   6   >   5

>   5   4   0 ——————————

                  3 0 <— 3 6 —> 4

     0

                 5   =

5

     6   7   5

———————————> 6   8   0

           7 0 <— 7 5 —>

    8 0

<u>**Actual sum**</u>

<u>**Estimated sum**</u>

     5   3   6

    5   4   0

  <u>+ 6   7   5</u>

<u>+ 6   8   0</u>

1 2   1   1

1 2   2   0

So , 1 2 1 1   <   1 2 2 0

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

7   >   5

Sol:- 1   3   5   7 ——————— > 1   3   6   0

5 0 <— 5 7 —> 6 0

6   >   5

7   5   8   6 —————————> 7   5   9   0

8 0 <— 5 7 —> 9 0

<u>Actual sum</u>

<u>Estimated sum</u>

$$\begin{array}{r} 1\ 3\ 5\ 7 \\ +7\ 5\ 8\ 6 \\ \hline \color{red}{8\ 9\ 4\ 3} \end{array}$$

$$\begin{array}{r} 1\ 3\ 6\ 0 \\ +7\ 5\ 9\ 0 \\ \hline \color{red}{8\ 9\ 5\ 0} \end{array}$$

So , 8 9 4 3 < 8 9 5 0