Chapter - 5

* Addition & Subtraction *

* Addition *

*. Introduction -

- Method

→ Always start from the unit place and carry to the next.

Eg! (carry) → 1

$$\begin{array}{r} 28 \\ +\ 16 \\ \hline 44 \end{array}$$

Ans.

* Properties -

(1.) Commutative property -

→ If the order of the two addends changed, then the sum does not change.

Eg! → $2+3 = 3+2$

$\boxed{5} = \boxed{5}$

(2.) → The sum of any no. and 0 is always the no. itself.

Eg! → $0+3=3$, $0+4=4$, $170+0=170$

(3.) Associative property -

→ The way of grouping the addends does not change the sum.

Eg! → $(2+3)+5 = 2+(3+5)$

$5+5 = 2+8$

$\boxed{10} = \boxed{10}$

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* Estimation -

→ Rules of Rounding off a number to -

Nearest 10	Nearest 100	Nearest 1000
• Consider ones digit.	• Consider tens digit.	• Consider hundred digit.
• If the no. is >5, put 0 at the ones place and Add 1 to the tens place.	• If the no. is >50. Add 1 to the hundred place and put 0 to the ones and ten's place.	• If the no. is >500 Add 1 to thousand place and put 0 at ones, tens & hundreds place.
• If the no. is <5, Put 0 at the ones place and no changes in the Tens place.	• If the no. is <50 put zeroes at the tens and ones place and keep hundred's digit as it is.	• If the no. is <500 put 0's at the ones, tens, hundreds places and keep the thousands digit as it is.

Exercise 5.1

Que. Add:

1)
$$\begin{array}{r} 3102 \\ +\ 2687 \\ \hline 5789 \end{array}$$

2)
$$\begin{array}{r} \overset{1}{3}\overset{1}{0}\overset{1}{1}4 \\ 4521 \\ +\ 9875 \\ \hline 17413 \end{array}$$

3)
$$\begin{array}{r} 4908 \\ 1205 \\ +\ 617 \\ \hline 6730 \end{array}$$

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4) ② ② ②
2165
2948
3557
+ 6887
15,557 Ans

5) ② ② ②
6185
9875
7737
+ 1894
25,691 Ans

Que2. A school ordered 7,875 books for library in the month of August. 2,198 more books were ordered in the month of September. How many books were ordered in all?

Sol. Books ordered in August = 7,875
Books ordered in September = + 2,198
∴ Total books ordered = 10,073 Ans

Que3. 3,895 people visited Dalhousie on Monday, 7289 visited on Tuesday and 6,429 visited on Wednesday. How many people visited Dalhousie on these 3 days?

Sol. ① ② ②
People visited on Monday = 3,895
People visited on Tuesday = 7,289
People visited on Wednesday = + 6,429
∴ Total people visited Dalhousie = 17,613 Ans.

Exercise 5.2 & 5.3

Q1. Add the following -

1) 1246
+ 2373
3619

2) ① ① ① ①
32728
+ 48975
81703

3)
$$\begin{array}{r} 2053 \\ 45210 \\ +\ 310424 \\ \hline 357687 \end{array}$$ Ans

4)
$$\begin{array}{r} 322420 \\ 142352 \\ +\ 200003 \\ \hline 664775 \end{array}$$ Ans

5)
$$\begin{array}{r} {\scriptstyle ①\ ①\ ①\ ②\ ①} \\ 31923 \\ 3486 \\ 519078 \\ +\ 93220 \\ \hline 926707 \end{array}$$ Ans

6)
$$\begin{array}{r} {\scriptstyle ①\ ②\ ②\ ②} \\ {\scriptstyle ②}\ 40803 \\ 162675 \\ 290765 \\ +\ 406389 \\ \hline 900632 \end{array}$$ Ans

Q2. Find the sum -

1) 2,45,326 + 5,24,286

→
$$\begin{array}{r} {\scriptstyle ①\ ①} \\ 2,45,326 \\ +\ 5,24,286 \\ \hline 7,69,612 \end{array}$$ Ans

2) 3,76,284 + 2,87,195 + 3,45,285

→
$$\begin{array}{r} {\scriptstyle ②\ ①\ \ ②\ ①} \\ 3,76,284 \\ 2,87,195 \\ +\ 3,45,285 \\ \hline 10,08,764 \end{array}$$ Ans

Q3. Write the number which is:

a) 10,000 more than 47,729

Sol.
$$\begin{array}{r} 47,729 \\ +\ 10,000 \\ \hline 57,729 \end{array}$$ Ans.

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b) 1,30,000 more than 24,528

→
$$\begin{array}{r} 1,30,000 \\ +\ 24,528 \\ \hline 1,54,528 \end{array}$$
Ans

c) 3,00,688 more than 1,17,500

→
$$\begin{array}{r} {}^{1}3,0\overset{1}{0},688 \\ +\ 1,17,500 \\ \hline 4,18,188 \end{array}$$
Ans

Q4. Mr. Dhoni earned ₹ 2,79,030 last year. This year he earned ₹ 1,88,590. What is his total earning in both the years?

Sol.

$$\begin{array}{r} {}^{1}{}^{1}{}^{1} \\ 2,79,030 \\ +\ 1,88,590 \\ \hline 4,67,620 \end{array}$$

Mr. Dhoni earned last year = ₹ 2,79,030
Present year he earned = ₹ 1,88,590
∴ Total earning = ₹ 4,67,620
Ans

Q5. In an election for a particular seat, there are 5 candidates. They received votes as follows:
I = 35,683, II = 39,283, III = 18,329, IV = 3,827
V = 743.
If 988 votes were found invalid, how many votes in all were polled?

Sol.

$$\begin{array}{r} {}^{2}{}^{3}{}^{3}{}^{3} \\ 35,683 \\ 39,283 \\ 18,329 \\ 3,827 \\ 743 \\ +\ 988 \\ \hline 98,853 \end{array}$$

Votes received by 1st candidate = 35,683
Votes received by 2nd candidate = 39,283
Votes received by 3rd candidate = 18,329
Votes " " 4th candidate = 3,827
" " " 5th candidate = 743
No. of invalid votes = + 988

∴ Total votes polled = 98,853
Ans

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Q6. The difference of two numbers is 98,136. If the smaller no. is 35,784. Find the greater no.?

Sol. Difference b/w the nos. = 98,136

Smaller no. = + 35,784

∴ The greater no. = 1,33,920 Ans

Q7. In an examination 1,42,588 candidates passed. If the no. of failure was 38,496. Find the no. of candidates who appeared in the examination?

Sol. No. of candidates passed = 1,42,588

No. of candidates failed = + 38,496

∴ Total candidates = 1,81,084 Ans

Estimation

Exercise 5.6

Q1. Estimate the following by rounding off to the nearest 10 :-

a) 9268

→ Consider ones place

8 > 5

So, Add 1 to tens place

ie. 6 + 1 = 7

∴ Rounding off to nearest to we have

= 9270 Ans

OR

9268 → 875

60 | 70

So, Rounding off to nearest to

= 9270 Ans

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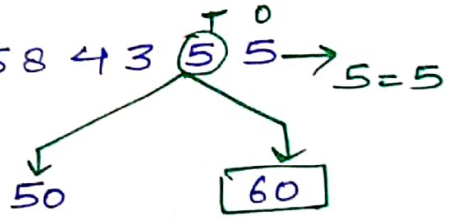
b) 584355

Sol. 5843 5 5 → 5=5

T O

50 | 60



∴ 584355 rounding off to nearest 10 = $\boxed{584360}$ Ans

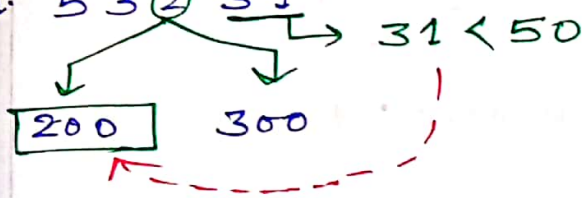
Q2. Estimate the following nos. to the nearest 100:-

a) 53231

Sol. 53 2 31 → 31 < 50

H T O

200 | 300



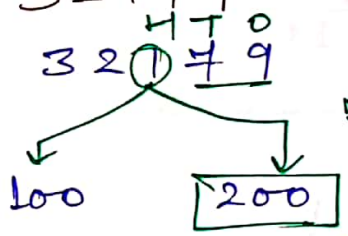
∴ 53231 rounding off to nearest 100 = $\boxed{53200}$ Ans

b) 32179

Sol. 32 1 79 → 79 > 50

H T O

100 | 200



∴ 32179 rounding off to nearest 100 = $\boxed{32200}$ Ans

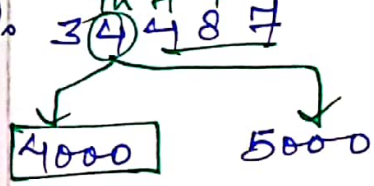
Q3. Estimate the following nos. to the nearest 1000?

a) 34487

Sol. 3 4 487 ∵ 487 < 500

Th H T O

4000 | 5000



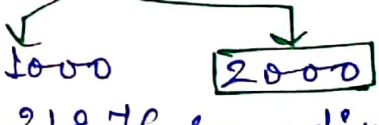
∴ 34487 rounding off to nearest 1000 = $\boxed{34000}$ Ans

b) 21876

Sol. 2 1 876 ∵ 876 > 500

Th H T O

1000 | 2000



∴ 21876 rounding off to nearest 1000 = $\boxed{22000}$ Ans

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Q4. Estimate 23 + 56 to the nearest 10?

Sol. 23 + 56

23 rounding off to nearest 10 = 20

56 rounding off to nearest 10 = + 60

∴ estimated sum = 80 Ans

Q5. Estimate 281 + 326 to the nearest hundreds?

Sol. 281 + 326

281 round off to nearest 100 = 300

326 round off to nearest 100 = + 300

∴ estimated sum = 600 Ans

Q6. Estimate 2673 + 8067 to nearest thousands?

Sol. 2673 + 8067

2673 round off to nearest 1000 = 3000

8067 round off to nearest 1000 = + 8000

∴ estimated sum = 11000 Ans

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* Subtraction *

→ Always starts from the unit place and borrow from the next place.

→ Q. 7 → Minuend → (The no. from which we are subtracting)

− 3 → Subtrahend → (The no. which is subtracting)

4 → Difference → (The result)

* Checking solution —

→ 7 − (M)

− 3 − (S) - - - - → + 3 (check)

4 − (D) - - - - → 7

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* Properties of Subtraction -

(1.) When a no. is subtracted from itself, the difference is zero.

$$a - a = 0$$

Eg: • $2 - 2 = 0$
• $117 - 117 = 0$

(2.) When the 0 is subtracted from the no., the difference is the no. itself.

$$a - 0 = 0 - a = a$$

Eg: • $18 - 0 = 18$
• $0 - 21 = 21$

Exercise - 5.7

Q1. Subtract -

1) $7527 - 2103 = 5424$

2) $9878 - 4732 = 5146$

3) $7302 - 5895 = 1407$

Q2. Simplify -

1) $5,319 + 2468 - 4,918$

Sol. $5319 + 2468 = 7,787$

$7,787 - 4918 = 2,869$ Ans

2) $4,570 + 2,865 - 3,987$

Sol. $4,570 + 2,865 = 7,435$

$7,435 - 3,987 = 3,448$ Ans

Q3. The population of a village in a certain year was 5,785. After 2 years the population was 8,429. Find the increase in population during the two years?

→

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Sol. → Population after 2 years = $\overset{7}{\cancel{8}}, \overset{13}{\cancel{4}}\overset{12}{\cancel{2}}9$

Population before 2 years = − 5,785

∴ Increase in population = $\boxed{2,644}$ Ans

Q4. A man had ₹ 8,500. He purchased a shirt for ₹ 2,350, a pant for ₹ 1,500 and a suitcase for ₹ 1,875. How much money still left with him?

Sol.

Shirt costs = ₹ $\overset{1}{2}, \overset{1}{3}50$

Pant costs = ₹ 1,500

Suitcase costs = + ₹ 1,875

Total money spent = ₹ 5,725

Now,

Amount he had = ₹ $\overset{7}{\cancel{8}}, \overset{14}{5}\overset{9}{\cancel{0}}\overset{10}{\cancel{0}}$

Total amount he spent = − ₹ 5,725

∴ Amount left = 2,775 Ans

Exercise 5.8 & 5.9

Q1. Subtract -

a) $\overset{2}{\cancel{3}}\overset{11}{\cancel{2}}\overset{14}{\cancel{5}}\overset{16}{\cancel{7}}\overset{12}{\cancel{2}}$

− 18695

13877 Ans

b) $\overset{3}{\cancel{4}}\overset{9}{\cancel{0}}\overset{11}{\cancel{2}}\overset{9}{\cancel{0}}\overset{9}{\cancel{0}}\overset{13}{\cancel{3}}$

− 289399

11,2604 Ans

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Q2. Find the difference between –

a) 60, 984 and 98, 789

Sol.

$$\begin{array}{r} {\scriptstyle 7\ \ 17} \\ 98,789 \\ -\ 60,984 \\ \hline 37,805 \end{array}$$

Ans

b) 2,76,984 & 4,85,680

Sol.

$$\begin{array}{r} {\scriptstyle 7\ 14\ 15\ 17\ 10} \\ 4,85,680 \\ -\ 2,76,984 \\ \hline 2,08,696 \end{array}$$

Ans

c) 8,84,000 & 7,99,999

Sol.

$$\begin{array}{r} {\scriptstyle 7\ 17\ 13\ 9\ 9\ 10} \\ 8,84,000 \\ -\ 7,99,999 \\ \hline 0,84,001 \end{array}$$

Ans

Q3. Subtract each of the following and check your answer –

a) 72,345 – 58,764

Sol.

$$\begin{array}{r} {\scriptstyle 6\ 11\ 12\ 14} \\ 72345 \\ -\ 58764 \\ \hline 13581 \end{array}$$

Ans.

• check –

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1} \\ 13581 \\ +\ 58764 \\ \hline 72345 \end{array}$$

b) 1,02,598 – 98796

Sol.

$$\begin{array}{r} {\scriptstyle 0\ 9\ 11\ 15} \\ 102598 \\ -\ 98796 \\ \hline 003802 \end{array}$$

Ans.

• check

$$\begin{array}{r} {\scriptstyle 1} \\ 03802 \\ +\ 98796 \\ \hline 102598 \end{array}$$

c) 4,00,000 – 2,99,999

Sol.

$$\begin{array}{r} {\scriptstyle 3\ 9\ 9\ 9\ 9\ 10} \\ 4,00,000 \\ -\ 2\ 99\ 999 \\ \hline 1,00,001 \end{array}$$

Ans.

check :

$$\begin{array}{r} {\scriptstyle 1\ 1\ 1\ 1\ 1} \\ 1,00,001 \\ +\ 2,99,999 \\ \hline 4,00,000 \end{array}$$

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Exercise 5.10 & 5.11

Q1. Find the missing Minuend and check your answer –

a) Subtrahend = 2,36,350
Difference = 1,32,537

Sol. Minuend = Sub. + Diff.

NOTE:
To find MINUEND
Add subtrahend & Difference.
(M) = (S) + (D)

2,3 6,3 5 0 → Subtrahend
+ 1,3 2, 5 3 7 → Diff.
3,6 8, 8 8 7 → Minuend

∴ Minuend = 3,68,887 Ans

How, check –

Minuend → 3,68,887
subtrahend → − 2,36,350
Difference → 1,32,537

b) subtrahend = 5,66,109; Difference = 2,27,729

Sol. Minuend = subtrahend + Difference.

① ①
5,6 6,10 9 → S
+ 2,2 7, 7 2 9 → D
7,9 3, 8 3 8 → M

∴ Minuend = 7,93,838 Ans

How, check:

8 13 2 18
M → 7,9 3, 8 3 8
S → − 5, 6 6, 1 0 9
D → 2, 2 7, 7 2 9

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Q2. Find the missing subtrahend and check your answer.

a) Minuend = 3,45,687

Difference = 99,864

→ $\boxed{\text{Subtrahend} = \text{Minuend} - \text{Difference}}$

$$\begin{array}{r} \overset{2}{\cancel{3}}\,\overset{13}{\cancel{4}}\,\overset{14}{\cancel{5}}\,\overset{16}{\cancel{6}}\,87 \\ -\ 99864 \\ \hline \boxed{2,45,823} \end{array} \begin{array}{l} \rightarrow M \\ \rightarrow D \\ \rightarrow S \end{array}$$

Ans.

Now,

check –

$$\begin{array}{r} \overset{1}{2},\overset{1}{4}\overset{1}{5},823 \\ +\ 99,864 \\ \hline 345,687 \end{array}$$

b) Minuend = 7,36,400, Difference = 5,66,337

→

$$\begin{array}{r} \overset{6}{\cancel{7}}\,\overset{13}{\cancel{3}}\,6\,\overset{3}{\cancel{4}}\,\overset{9}{\cancel{0}}\,\overset{10}{\cancel{0}} \\ -\ 566337 \\ \hline \boxed{170063} \end{array} \begin{array}{l} \rightarrow M \\ \rightarrow D \\ \rightarrow S \end{array}$$

Ans

Now, check –

$$\begin{array}{r} \overset{1}{5}66\overset{1}{3}\overset{1}{3}7 \\ +\ 170063 \\ \hline 736,400 \end{array}$$

Q3. Find the no. from which 3,34,210 must be subtracted to give 1,17,967?

Sol. Given: Subtrahend = 3,34,210

Difference = 1,17,967

Minuend = ?

Minuend = Subtrahend + Difference

$$\begin{array}{r} \overset{1}{3},\overset{1}{3}4,210 \\ +\ 1,17,967 \\ \hline 4,52,177 \end{array}$$

Ans.

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Q4. Find the no. from which when subtracted from 1,35,678 to give a difference 99,538 ?

Sol. Given: Minuend = 1,35,678
Difference = 99,538
Subtrahend = ?

Subtrahend = Minuend − Difference.

$$\begin{array}{r} {}^{0}1\,{}^{2}\,{}^{15} \\ 1,35,678 \\ -\ 99,538 \\ \hline 0,36,140 \end{array}$$

Ans

Q5. The sum of two nos. is 80,375. If one no. is 25,787. Find the other no. ?

Sol. Sum of two nos. = 80,375 (Minuend)
One no. = − 25787 (sub.)
∴ other no. = 54,588

Ans

Q6. The difference between two nos is 14,397. If the greater no. is 1,17,510. what is the smaller no. ?

Sol. Given: Difference = 14,397
Greater no. (Minuend) = 1,17,510
Smaller no. (Subtrahend) = ?

∴ 1,17,510 − 14,397

$$\begin{array}{r} {}^{4}\,{}^{10}\,{}^{10} \\ 1\,1\,7,5\,\not{1}\,0 \\ -\ 1\,4,3\,9\,7 \\ \hline 1\,0\,3,1\,1\,3 \end{array}$$

Ans

Q7. Mr. William bought a house for ₹ 8,56,780. He sold it for ₹ 1,50,000 less than what he paid. How much did he get for the house?

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Sol. Cost price of the house = ₹ 8, 56, 780
Loss = ₹ 1, 50, 000

∴ Selling price of the house = ₹ 7, 06, 780 Ans

Q8. Mr. Thomson had ₹ 9, 97, 865. He gave ₹ 1, 85, 000 to his son, ₹ 2, 10, 000 to his daughter & the rest to his wife. How much money did he give to his wife?

Sol. Given: Total Amount = ₹ 9, 97, 865

Amount to his son = ₹ 1, 85, 000
Amount to his daughter = ₹ 2, 10, 000
+
∴ Total Amount to children = ₹ 3, 95, 000

Now,

Total Amount = ₹ 9, 97, 865
Amount to children = ₹ 3, 95, 000
∴ Amount given to wife = ₹ 6, 02, 865 Ans.

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* Estimation *

Que 1. Estimate 56546 − 53451 to the nearest 10 ?

Sol. 56546 − 53451

56546 round off to nearest 10 = 56550
53451 round off to nearest 10 = 53450
∴ estimated difference = 56,550 − 53,450
= 3,100 Ans

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Q9. Estimate 45822 - 17544 by rounding off to nearest 100 ?

Sol. 45822 - 17544

45822 round off to nearest 100 = 45800

17544 round off to nearest 100 = 17500

∴ estimated difference = 28300 Ans

Q8. Estimate 78432 - 65887 by rounding off to nearest 1000 ?

Sol. 78432 - 65887

78432 round off to nearest 1000 = 78432

65887 round off to nearest 1000 = 65887

∴ estimated difference = 12,545. Ans

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