

# CHAPTER-1

## Numbers

### You know that-

In the abacus, when the ones position reaches the tenth bead, we put one bead in the tens position instead.

Each bead in the tens position indicates 10 ones. Similarly when the tens position reaches the tenth bead, we add one bead in the hundred position instead.

That is  $10 \text{ tens} = 1 \text{ hundred}$

We similarly put one bead in a new place when the tenth bead gets added to the hundreds position.

This new place is the thousands position

$10 \text{ ones} = 1 \text{ ten}$

$10 \text{ tens} = 1 \text{ hundred}$

$10 \text{ hundreds} = 1 \text{ thousand}$

Now look at the given picture

What number is indicated by the beads in the abacus?

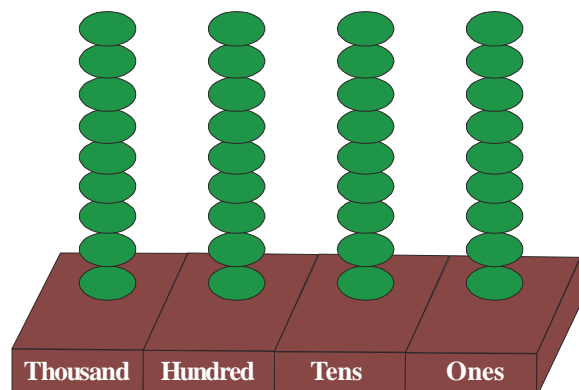
.....

Now if we were to add one more bead in the ones position what will you do?

Discuss it with your friends and teacher.

If you need an abacus take it and do it yourself.

You must remember that like before on reaching the 10 beads in any position you will create a new place. You are absolutely right!



## Maths - 5

The new position is known as the ten thousands position.

$$9999 + 1 = 10,000$$

**You are given some numerals in figures and words. Look at them and read the names.**

12,500	Twelve thousand five hundred
52,457	Fifty two thousand four hundred fifty seven
93,509	Ninety three thousand five hundred nine
94,060	Ninety four thousand sixty
10,325	Ten thousand three hundred twenty five
27,627	Twenty seven thousand six hundred twenty seven
20,005	Twenty thousand five
30,360	Thirty thousand three hundred sixty
04,252	Four thousand two hundred fifty two



**Write the given numerals in words:**

90,932	_____
76,180	_____
58,151	_____
65,839	_____
09,424	_____
18,381	_____
77,124	_____
45,864	_____
89,691	_____



Now try making some five digit numerals on your own. Write the numbers in words and show it to your friends and teacher.



Write the following numerals in figures:

Twenty five thousand three hundred and ninety \_\_\_\_\_

Ninety one thousand two hundred and fifty five \_\_\_\_\_

Forty thousand and seventy nine \_\_\_\_\_

Eighty nine thousand \_\_\_\_\_

Seventy two thousand and nine \_\_\_\_\_

## Place value

**Example 1 :** Write the place value of each digit of 48,567 and write it in the expanded form.

**Solution :**

Digit	position	place value
7	Ones	$7 \times 1 = 7$
6	Tens	$6 \times 10 = 60$
5	Hundreds	$5 \times 100 = 500$
8	Thousands	$8 \times 1000 = 8000$
4	Ten thousands	$4 \times 10,000 = 40,000$

The expanded form of  $48,567 = 40000 + 8000 + 500 + 60 + 7$

Write the place value of each digit of the given numerals and write the expanded form too :

(1) 25,462                      (2) 82,574                      (3) 34,016

(4) 40,710                      (5) 50,078                      (6) 93,509

Make some numerals of 5 digits and write the place value of the digits and write the expanded form of each.

**Write the numerals which come just before and just after:**

_____	98,297	_____
_____	50,932	_____
_____	49,291	_____
_____	15,817	_____
_____	14,509	_____



The numeral which comes just before is called the predecessor of the given numeral  
The numeral which comes just after is called the successor of the given numeral.

**Now answer these:**



- (1) Successor of 99 is \_\_\_\_\_ (2) Predecessor of 100 is \_\_\_\_\_  
(3) Successor of 999 is \_\_\_\_\_ (4) Predecessor of 1000 is \_\_\_\_\_

The smallest 3 digit number comes just after the largest 2 digit number.  
The largest 2 digit number comes just before the smallest 3 digit number.

So can we say that the smallest 6-digit number comes just after the largest five-digit number? Find out.

**Write the following numerals in an increasing order:**

- |    |       |       |       |       |
|----|-------|-------|-------|-------|
| 1. | 15775 | 25525 | 20950 | 15975 |
| 2. | 77777 | 70777 | 77077 | 77707 |
| 3. | 45554 | 45545 | 45455 | 44555 |
| 4. | 90979 | 89979 | 79989 | 87979 |



**Write the following numerals in a decreasing order:**

- |    |       |       |       |       |
|----|-------|-------|-------|-------|
| 1. | 17426 | 27246 | 37642 | 47548 |
| 2. | 30636 | 35045 | 04545 | 40538 |
| 3. | 6978  | 786   | 81316 | 52374 |
| 4. | 33225 | 52233 | 11111 | 12345 |

## Lakh, Ten lakhs, Crore

Now you know how numbers increase. Whenever we reach the 10th beads in any position, we add one bead in the next position instead of 10 beads in that position. Each new position has a new name.

**We know that:**

10 ones = 1 ten                      10 tens = 1 hundred  
10 hundreds = 1 thousand              10 thousands = 1 ten thousand

This continues even after the ten thousands, also. Let us know the number which come after ten thousand.

10 ten thousand = 1 lakh                      10 lakhs = 1 ten lakh  
10 ten lakhs = 1 crore                      10 crores = 1 ten crore

The numerals given in the table below are written in figures and words. Understand them properly and take the help of your teacher if required.

	Crores		Lakhs		Thousand		Hundred	Tens	Ones
	Ten crore	Crone	Ten lakh	Lakh	Ten thousand	Thousand			
7,25,420 Seven lakh twenty five thousand four hundred twenty				7,00 000	20 000	5000	400	20	0
25,04,562 Twenty five lakh four thousand five hundred sixty two			20 00 000	5 00 000	0	4000	500	60	2
10,27,985 Ten lakh Twenty seven thousand nine hundred eighty five			10 00 000	0	20 000	7000	900	80	5
3,15,34,859 Three crores fifteen lakh thirty four thousand eight hundred fifty nine		300 00 000	10 00 000	5 00 000	30 000	4000	800	50	9
94,24,15,378 Ninety four crores twenty four lakh fifteen thousand three hundred seventy eight	90 00 00 000	4 00 00 000	20 00 000	4 00 000	10 000	5000	300	70	8

**Write the given numeral in figures or words as required**

7,24,520 \_\_\_\_\_

\_\_\_\_\_ Five lakh twenty three thousand seven hundred twelve

25,54,399 \_\_\_\_\_

\_\_\_\_\_ Seventy two lakh six thousand three hundred ten

1,93,25,465 \_\_\_\_\_

\_\_\_\_\_ Three crores twenty two lakhs fourty six thousand

\_\_\_\_\_ Seven crores

90,00,00,000 \_\_\_\_\_

**Which number is nearest -**

48 is the number between 40 and 50.

48 is nearest to which number, 40 or 50 ?

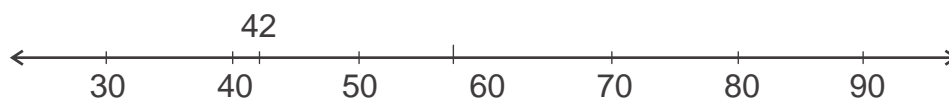


The number representation on number line we find that 48 is nearest to 50.

Which is nearest ten.

42 is the number between 40 and 50

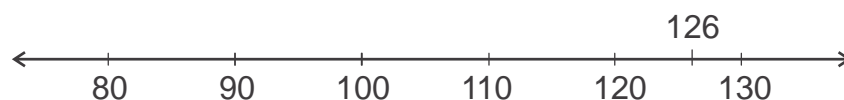
42 is nearest to which number?



The number representation on number line we find that 42 is nearest to 40.

Which is nearest ten.

126 is nearest to which number?

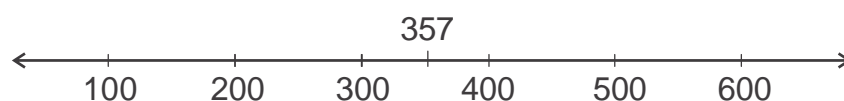


The number representation on number line we find that 126 is nearest to 130.

Which is nearest ten.

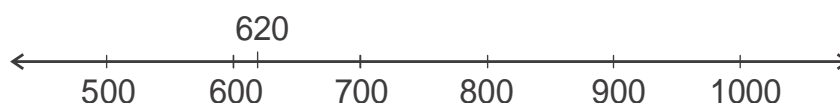
357 is between 300 and 400

357 is nearest to which number?



The number representation on number line we find that 357 is nearest to 300. Which is nearest hundred.

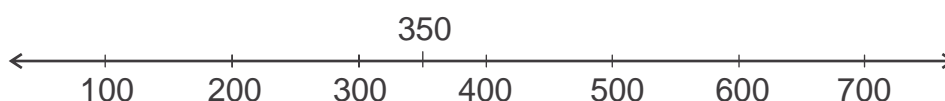
620 is nearest to which number?



The number representation on number line we find that 620 is nearest to 600. Which is nearest hundred.

**Special case :-** If a number is exactly between any two number, then how can we find its nearest number?

350 is nearest to which number?



350 is exactly between 300 and 400. In this condition we will take 400 as its nearest number. So 350 is nearest to 400

1. Find out the nearest tens of given numbers.  
62,            95,            93,            459
2. Find out the nearest hundred of the given numbers.  
249,            709,            698,            650
3. Find out the nearest ten and hundred of the given numbers.  
245,            808,            976,            138

## Estimation of Addition –

**Example –** There are 63 coins in one bag and 39 coins in another bag. If we merge coins of both bags, then do the assessment of total coins.

Before assessment of  $(63 + 39)$  we have to find nearest ten of 63 and 39 and add them.

Number	Nearest ten
63	60
39	40

$$\begin{array}{r}
 \text{Estimated total} \quad 60 \\
 + 40 \\
 \hline
 100
 \end{array}$$

$$\begin{array}{r}
 \text{Actual total} \quad \begin{array}{c} 1 \\ 63 \end{array} \\
 + 39 \\
 \hline
 102
 \end{array}$$

By merging coins of both bags, we have to get 100 coins approximately. Like this, the difference between estimate total (100) and actual total (102) is 2 only.

Example – There are 375 mangoes in one box and 216 mangoes in another box. Do the estimation of total number of mangoes.

Before estimation of (375 + 216) we have to find nearest hundred of 375 and 216 and add them.

Number	Nearest hundred
378	400
216	200

$$\begin{array}{r}
 \text{Estimated Sum} \quad 400 \\
 + 200 \\
 \hline
 600
 \end{array}$$



$$\begin{array}{r} \text{Actual Sum (1)} \quad \quad \quad \begin{array}{r} 1 \\ 378 \\ + 216 \\ \hline 594 \end{array} \end{array}$$

The estimated number of total mangoes are 600, which is very nearer to actual number 594 of total mangoes.

Example – In a factory, 1789 female and 1436 male workers are working. Do the estimation of total number of workers.

Before estimation of (1789 + 1436) we have to find nearest thousand of 1789 and 1436 and add them-

Number	Nearest Thousand
1789	2000
1436	1000

$$\begin{array}{r} \text{Estimated Sum} \quad \quad \quad \begin{array}{r} 2000 \\ + 1000 \\ \hline 3000 \end{array} \end{array}$$

$$\begin{array}{r} \text{Actual Sum} \quad \quad \quad \begin{array}{r} 111 \\ 1789 \\ + 1436 \\ \hline 3225 \end{array} \end{array}$$

Find out the estimated sum by rounding off to nearest ten and also find actual sum.

- (1) 46, 81                      (2) 96, 15                      (3) 72, 88                      (4) 34, 65

Find out the estimated sum by rounding off to nearest hundred and also find actual sum.

- (1) 436, 356                      (2) 164, 719                      (3) 506, 271                      (4) 632, 225

Find out the estimated sum by rounding off to nearest thousand and also find actual sum.

(1) 4360, 5812      (2) 3756, 140      (3) 7015, 2512      (4) 3160, 6420

### Estimation of difference :-

**Example** – The number of boys and girls in class 5<sup>th</sup> are 28 and 36 respectively. Do the estimation of difference of their numbers.

Before estimation of (36-28) we have to find nearest ten of 36 and 28 and subtract them -

Number	Nearest Ten
36	40
28	30

$$\begin{array}{r}
 \text{Estimated difference} \quad 40 \\
 - 30 \\
 \hline
 10
 \end{array}$$

$$\begin{array}{r}
 \text{Actual difference} \quad 36 \\
 - 28 \\
 \hline
 8
 \end{array}$$

The difference between estimated number of girls and boys is 10, which is very nearer to actual difference 8.

**Example** - Mangoes collected from two gardens are 356 and 125 respectively. Do the estimation of their difference.

We are rounding off 356 and 125 to their nearest hundred and subtract them-

Number	Nearest hundred
356	400
125	100

$$\begin{array}{r} \text{Estimated difference} \quad 400 \\ - 100 \\ \hline 300 \end{array}$$

$$\begin{array}{r} \text{Actual difference} \quad 356 \\ - 125 \\ \hline 231 \end{array}$$

Example – The cost of a TV and a bicycle is 5680 and 3140 respectively. Do the estimation of their price difference.

Number	Nearest Thousand
5680	6000
3140	3000

$$\begin{array}{r} \text{Estimated difference} \quad 6000 \\ - 3000 \\ \hline 3000 \end{array}$$

$$\begin{array}{r} \text{Actual difference} \quad 5680 \\ - 3140 \\ \hline 2540 \end{array}$$

Find out the actual difference and estimated difference by rounding off to their nearest ten.

$$\begin{array}{r} 58 \\ - 43 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ - 57 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 476 \\ - 151 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 576 \\ - 237 \\ \hline \\ \hline \end{array}$$

Find out the actual difference and estimated difference by rounding off to their nearest hundred.

$$\begin{array}{r} 637 \\ - 358 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 365 \\ - 151 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 926 \\ - 576 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4816 \\ - 1381 \\ \hline \\ \hline \end{array}$$

Find out the actual difference and estimated difference by rounding off to their nearest thousand.

$$\begin{array}{r} 5168 \\ - 2713 \\ \hline \end{array}$$

$$\begin{array}{r} 8653 \\ - 1449 \\ \hline \end{array}$$

$$\begin{array}{r} 8270 \\ - 4159 \\ \hline \end{array}$$

### Estimation of multiplication –

#### Example –

Do the estimation of multiplication of 51 and 36

Number	Nearest Ten
51	50
36	40

Estimated multiplication

$$\begin{array}{r} 50 \\ \times 40 \\ \hline 00 \\ 2000 \\ \hline \end{array}$$

Actual multiplication

$$\begin{array}{r} 51 \\ \times 36 \\ \hline 306 \\ 1530 \\ \hline 1836 \end{array}$$

**Example –**

Do the estimation of multiplication of 432 and 261

Number	Nearest hundred
432	400
261	300

Estimated multiplication

$$\begin{array}{r}
 400 \\
 \times 300 \\
 \hline
 000 \\
 0000 \\
 120000 \\
 \hline
 120000
 \end{array}$$

Actual multiplication

$$\begin{array}{r}
 432 \\
 \times 261 \\
 \hline
 432 \\
 25920 \\
 86400 \\
 \hline
 112752
 \end{array}$$

Find out the estimated product and actual product by rounding off to their nearest ten.

$23 \times 58$

$46 \times 91$

$55 \times 21$

Find out the estimated product and actual product by rounding off to their nearest hundred.

$513 \times 156$

$263 \times 449$

**Estimation of division –**

**Example –**  $62 \div 26$

Number	Nearest Ten
62	60
26	30

Estimated division

$$\begin{array}{r} 2 \\ 30 \overline{)60} \\ \underline{60} \\ 00 \end{array}$$

Actual division

$$\begin{array}{r} 2 \\ 26 \overline{)62} \\ \underline{52} \\ 10 \end{array}$$

**Example –**

$$256 \div 26$$

256 is nearest to 300

26 is nearest to 30

So, divide 300 by 30

Estimated division

$$300 \div 30$$

$$\begin{array}{r} 10 \\ 30 \overline{)300} \\ \underline{300} \\ 000 \end{array}$$

Actual division -

$$\begin{array}{r} 13 \\ 26 \overline{) 356} \\ \underline{26} \phantom{6} \\ 96 \\ \underline{78} \\ 18 \end{array}$$

Estimated division result (10) is very nearest to actual division result (13)

Do the estimation of Division

1.  $87 \div 28$

2.  $75 \div 21$

3.  $296 \div 31$

4.  $628 \div 24$



### Exercise

1. Make numbers of more than five digits. Then write all the numbers in words. Show them to your friends. Who made the maximum numbers ?
2. Make group of three digit numbers you have made. Now arrange them in ascending and descending order and show it to your teacher.
3. Write place value of the each digits of the numbers you have made and also write their expanded form.