NAME-………………   **DATE:- 22/04/2020**

Comparison of Large Numbers

To compare the large numbers, we follow the same rules that we follow in case of small numbers.

1. A number containing more digits is always greater than the number containing less digits.

2. If two numbers contain the same number of digits, we compare them by the leftmost digits, if they are same,

we compare them by next digits from left and so on.

Let's have a look at some examples.

Example 1. Compare 2487321 and 783453.

Solution. 2487321 is having 7 digits and 783453 is having 6 digits. So, 2487321 is greater than 783453.

Example 2. Compare 78673245 and 78766789.

Solution. 78673245 and 78766789 both are having 8 digits. So, from the number of digits we can not conclude that which number is greater. Left most two digits of both the numbers are 78, that means we cannot conclude which number is greater. Comparing the next digits of both the numbers i.e. 7 > 6, so 78766789 is greater than 78673245.
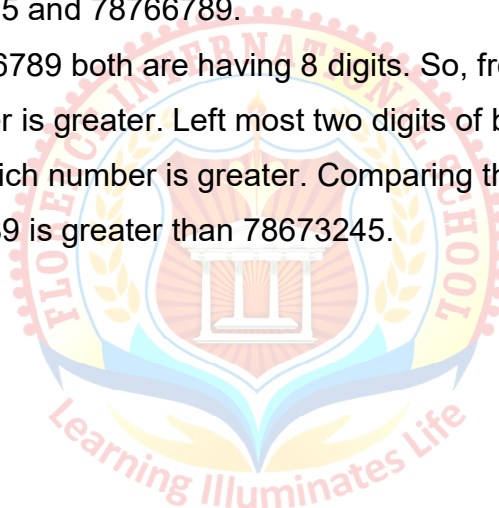
Use the symbols >, < and = to compare the numbers.

1) 3728173	>	2983177	11) 743828	691837	21) 491837	4198037
2) 1029382		932718	12) 8710383	8710383	22) 7013876	7013786
3) 7263712		7092817	13) 6182737	6182373	23) 1653002	1563007
4) 6251517		6700281	14) 481903	4180309	24) 8090183	8009138
5) 428271		3910286	15) 9018362	9103826	25) 5198225	5198225
6) 2031817		782817	16) 6281704	682714	26) 4910634	4913064
7) 1720384		1273840	17) 8291801	8291081	27) 2108938	2019838
8) 6377183		6377183	18) 762830	7268030	28) 6782094	6784092
9) 4083727		4801838	19) 1020245	1020254	29) 418929	4182929
10) 6918373		718379	20) 581739	518397	30) 8050103	8050013

Compare these amounts.

31)	7183725	>	7000000 + 182000
32)	1029384		1000000 + 200000
33)	5400000 + 27950		5500000
34)	1928302		1900000 + 30000
35)	3801637		300000 + 85000
36)	572000 + 795		5000000 + 8000
37)	7800000 + 6000		7000000 + 820000
38)	370000 + 7629		300000 + 77000 + 620 + 9
39)	5900000 + 6750		5000000 + 950000
40)	1930000 + 8140		1900000 + 38000 + 135

Introduction to Rounding Off

Population of USA is 32 crores. But, does that mean the number is actually 32 crores? No, when we describe large numbers we often express them as round numbers. Round number is nothing but an approximate number, that is, it is very close to the exact number.

Let's discuss about some more examples.

Length of Amazon River is 6992 km, but while expressing we can say it is 7000 km.

Height of Eiffel tower is 1063 feet, but while expressing we can say it is 1000 feet.

We must follow below mentioned rules to rounding off a number.

1. If the digit at the lower place value is less than five, we round off the number by keeping the digit at the same and writing zeros in all the lower place values.

2. If the digit at the lower place value is equal or greater than five, we round off the given number by adding the digit by one and writing zeros in all the lower place values.

Rounding Off to Nearest Ten

We compare the digit at the ones place with five to round off to the nearest ten. If ones place digit is less than five, then we round off the number by replacing the digit in the ones place by zero.

Example 1. Round off 42 to the nearest tens place.

Solution. In 42, two is present in the ones place and it is less than five. We have to make ones place zero of number 42,that is the round off number is 40.

Example 2. Round off 574 to the nearest tens place.

Solution. 4 is present in ones place of 574 and it is less than number five. So, if we round off 574 to it's tens place then the new number will be 570.

Example 3. Round off 6751 to tens place.

Solution. 1 is present in ones place and 1 < 5. If we round off 6751 to tens place then the new number will be 6750. If the digits in ones place is greater than or equal to 5 , then we round off the number by increasing the digit at tens place by 1 and writing zero in the ones place.

Example 1. Round off 348 to the nearest tens place.

Solution. 8 is present in ones place of 348 and 8 > 5. If we round off 348 then the new number will be 350.

Example 2. Round off 9765 to the nearest tens place.

Solution. 5 is present in ones place and it is equal to 5. If we round off 9765 then the new number will be 9770.

Rounding Off to Nearest Hundred

We compare the digit at the tens place with 5 to round off numbers to the nearest hundred. If the digit in the tens place is less than five, then we replace the digits in tens and ones places with zeros.

Example 1. Round off 6542 to the nearest hundred.

Solution. 4 is present in the tenth place of 6542 and 4 < 5. If we round off 6542, then the new number will be 6500.

Example 2. Round off 85621 to the nearest hundred.

Solution. 2 is present in the tenth place of 85621, and 2 < 5. If we round off 85621, then the new number will be 85600. If the digits in tens place is greater than or equal to 5, then we round off the number by increasing the digit at hundredth place by 1 and writing zero in the remaining lower places.

Example 1. Round off 3259 to the nearest hundred.

Solution. 5 is present in the tenth place of 3259, and 5 = 5. If we round off 3259, then the new number will be 3300.

Example 2. Round off 47689 to the nearest hundred.

Solution. 8 is present in the tenth place of 47689, and 8 > 5. If we round off 47689, then the new number will be 47690.

Rounding Off to Nearest Thousand

We compare the digit at the hundredth place with 5 to round off numbers to the nearest thousand. If the digit in the hundredth place is less than five, then we replace the digits in hundred, tens and ones places with zeros.

Example 1. Round off 6259 to the nearest thousand.

Solution. 2 is present in the hundredth place of 6259, and 2 < 5. If we round off 6259, then the new number will be 6000.

Example 2. Round off 46495 to the nearest thousand.

Solution. 4 is present in the hundredth place of 46495, and 4 < 5. If we round off 46495, then the new number will be 46000. If the digits in hundredth place is greater than or equal to 5, then we round off the number by increasing the digit at thousandth place by 1 and writing zero in the remaining lower places.

Example 1. Round off 5759 to the nearest thousand.

Solution. 7 is present in the hundredth place of 5759, and 7 > 5. If we round off 5759, then the new number will be 5800.

Example 2. Round off 47689 to the nearest thousand.

Solution. 6 is present in the hundredth place of 47689, and 6 > 5. If we round off 47689, then the new number will be 48000.

Rounding Off to Nearest Ten Thousand

We compare the digit at the thousandth place with 5 to round off numbers to the nearest ten thousand. If the digit in the thousandth place is less than five, then we replace the digits in thousand, hundred, tens and ones places with zeros.

Example 1. Round off 61259 to the nearest thousand.

Solution. 1 is present in the thousandth place of 61259, and 1 < 5. If we round off 61259, then the new number will be 61000.

Example 2. Round off 342495 to the nearest thousand.

Solution. 2 is present in the thousandth place of 342495, and 2 < 5. If we round off 342495, then the new number will be 340000. If the digits in thousandth place is greater than or equal to 5, then we round off the number by increasing the digit at ten thousandth place by 1 and writing zero in the remaining lower places.

Example 1. Round off 36759 to the nearest thousand.

Solution. 6 is present in the thousandth place of 36759, and 6 > 5. If we round off 36759, then the new number will be 37000.

Example 2. Round off 247689 to the nearest thousand.

Solution. 7 is present in the thousandth place of 247689, and 7 > 5. If we round off 247689, then the new number will be 248000.

Rounding Off to Nearest Lakh

We compare the digit at the ten thousandth place with 5 to round off numbers to the nearest lakh. If the digit in the ten thousandth place is less than five, then we replace the digits in ten thousand, thousand, hundred, tens and ones places with zeros.

Example 1. Round off 241259 to the nearest lakh.

Solution. 4 is present in the ten thousandth place of 241259, and 4 < 5. If we round off 241259, then the new number will be 200000.

Example 2. Round off 5342495 to the nearest lakh.

Solution. 4 is present in the ten thousandth place of 5342495, and 4 < 5. If we round off 5342495, then the new number will be 5300000. If the digits in ten thousandth place is greater than or equal to 5, then we round off the number by increasing the digit at the lakh place by 1 and writing zero in the remaining lower places.

Example 1. Round off 456759 to the nearest lakh.

Solution. 5 is present in the ten thousandth place of 456759, and 5 = 5. If we round off 456759, then the new number will be 500000.

Example 2. Round off 2287689 to the nearest lakh.

Solution. 8 is present in the ten thousandth place of 2287689, and 8 > 5. If we round off 2287689, then the new number will be 2300000.

Rounding Off to Nearest Ten Lakh

We compare the digit at the lakh place with 5 to round off numbers to the nearest ten lakh. If the digit in the lakh place is less than five, then we replace the digits in lakh, ten thousand, thousand, hundred, tens and ones places with zeros.

Example 1. Round off 3146259 to the nearest ten lakh.

Solution. 1 is present in the lakh place of 3146259, and 1 < 5. If we round off 3146259, then the new number will be 3000000.

Example 2. Round off 35342495 to the nearest lakh.

Solution. 3 is present in the ten thousandth place of 35342495, and 3 < 5. If we round off 35342495, then the new number will be 35000000. If the digits in lakh place is greater than or equal to 5, then we round off the number by increasing the digit at the ten-lakh place by 1 and writing zero in the remaining lower places.

Example 1. Round off 1656759 to the nearest ten-lakh.

Solution. 6 is present in the lakh place of 1656759, and 6 > 5. If we round off 1656759, then the new number will be 2000000.

Example 2. Round off 53683219 to the nearest ten-lakh.

Solution. 6 is present in the lakh place of 53683219, and 6 > 5. If we round off 53683219, then the new number will be 54000000.

Rounding Off to Nearest Crore

We compare the digit at the ten-lakh place with 5 to round off numbers to the nearest crore. If the digit in the ten-lakh place is less than five, then we replace the digits in ten lakh, lakh, ten thousand, thousand, hundred, tens and ones places with zeros.

Example 1. Round off 53146259 to the nearest crore.

Solution. 3 is present in the ten-lakh place of 53146259, and 3 < 5. If we round off 53146259, then the new number will be 50000000.

Example 2. Round off 432761495 to the nearest crore.

Solution. 2 is present in the ten-lakh place of 432761495, and 2 < 5. If we round off 432761495, then the new number will be 430000000. If the digits in ten lakh place is greater than or equal to 5, then we round off the number by increasing the digit at the crore place by 1 and writing zero in the remaining lower places.

Example 1. Round off 78656759 to the nearest crore.

Solution. 8 is present in the ten-lakh place of 78656759, and 8 > 5. If we round off 78656759, then the new number will be 80000000.

Example 2. Round off 157683219 to the nearest crore.

Solution. 7 is present in the ten-lakh place of 157683219, and 7 > 5. If we round off 157683219, then the new number will be 160000000.

Q- Tick the correct option:

1. Round of 8764 to the nearest ten.

a) 8765   b) 8770

c) 8760   d) None of these

2. Round off 456879 to the nearest ten.

a) 456879   b) 456880

c) 456870   d) None of these

3. Round off 345672 to the nearest ten thousand.

a) 350000   b) 345000

c) 340000   d) 300000

4. Round off 68753219 to the nearest hundred.

a) 68753219   b) 68753220

c) 68753200   d) 68753000

5. Round off 85000000 to the nearest crore.

a) 80000000   b) 85000000

c) 86000000   d) 90000000

6. Round off 389742136 to the nearest ten-lakh.

a) 389000000   b) 390000000

c) 389700000   d) 389600000

7. Round off 243718806 to the nearest lakh.

a) 24370000   b) 243700000

c) 243600000   d) None of these

8. Population of a country is 23576894 and population of neighboring country is 40572819. What is the population of two countries rounded off to the nearest ten-lakh?

a) 65000000   b) 6400000

c) 64000000   d) 66000000

9. Add the greatest 8-digit number to the greatest 7-digit number and round off the sum to the nearest ten thousand.

a) 109999998   b) 110000000

c) 101000000   d) None of these

10. Subtract the greatest 7-digit number from the smallest 9-digit number and round off the difference to the nearest lakh.

a) 90000001   b) 90000000

c) 9000000   d) 900000000