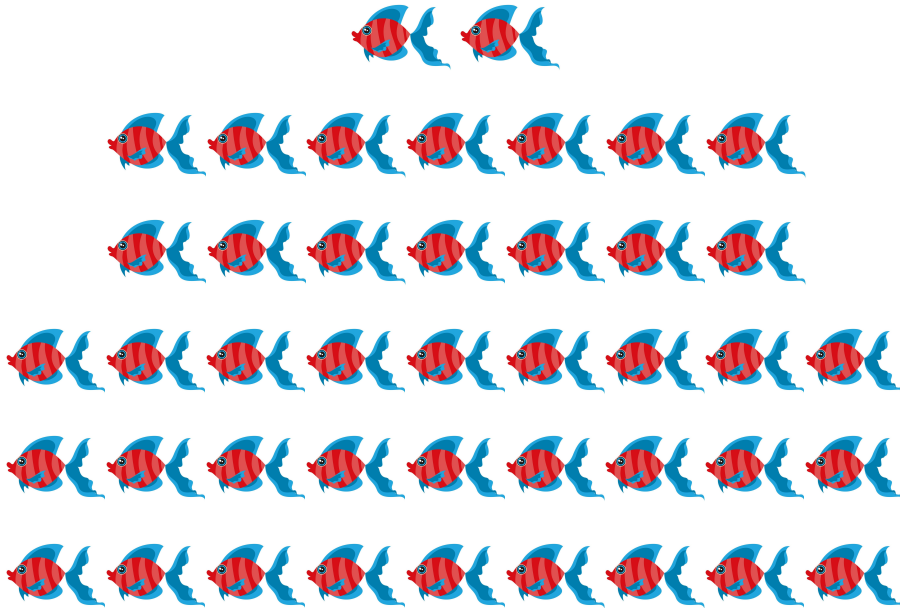## QUICK CONCEPT REVIEW

Introduction:

A number is a mathematical object which is used to count, measure and label.

Example: Count the number of fishes below.

Solution: Total number of fishes = 35.

Trees and Ones:

Let us count tens and ones using an example

In the first two figures, there are 10 fishes each.

In the third figure, there are 5 fishes.

So, 2 tens + 5 ones = 20 + 5 = 25.

T	O
2	5

Similarly, we can say that,

35 = 30 + 5 = 3 tens and 5 ones.

Patterns - Skip Counting:

Look at the following series of numbers.

4   **6**   **8**   **10**   **12**

In the above series, counting is done by leaving a number in between.

So, after 4 comes 6, where 5 is missing and after 8 comes 10 where 9 is missing.

Once, we know the pattern, we can easily write the number that comes next.

In the series above, the next two numbers after 12 will be 14 and 16.
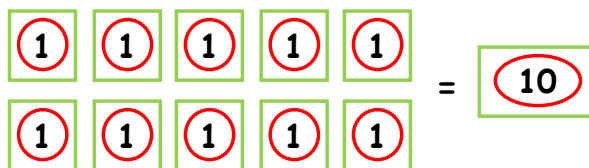
Getting Ready for Numbers:

Beyond 100:
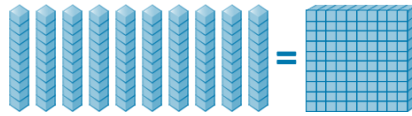
Hundreds, Tens, And Ones:

We know that,

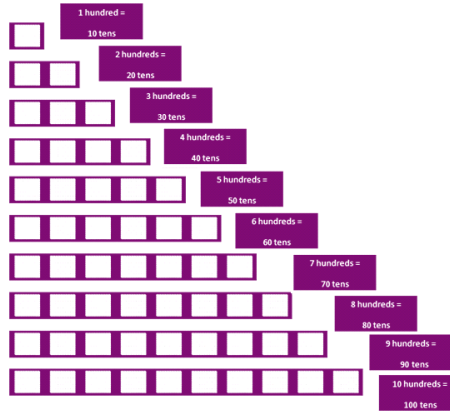10 ones = 1 ten

Similarly, 10 tens = 1 hundred.

10 ones = 1 ten

1 1 1 1 1
1 1 1 1 1   =   10

10 tens = 1 hundred

Let us see few examples of numbers forming 100:

1 hundred = 10 tens

2 hundreds = 20 tens

3 hundreds = 30 tens

4 hundreds = 40 tens

5 hundreds = 50 tens

6 hundreds = 60 tens

7 hundreds = 70 tens

8 hundreds = 80 tens

9 hundreds = 90 tens

10 hundreds = 100 tens

Writing Numbers Beyond 100

HUNDREDS	TENS	ONES
100	10	1
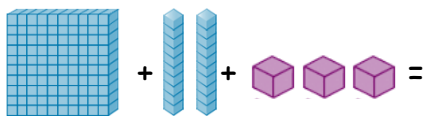
1 Hundred + 2 Tens + 3 Ones =

1	2	3
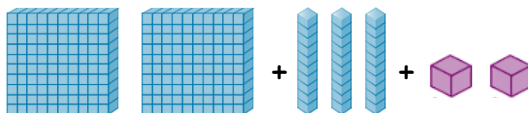
= 3 Hundred + 1 Ten + 6 Ones =

3	1	6
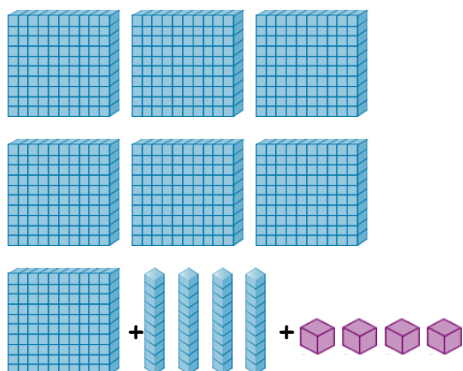
= 7 Hundreds + 4 Tens + 4 Ones

= | **7** | **4** | **4** |

On adding 1 and 999, we get 1000.

TH	H	T	O
	9	9	9
			1

+

| **1** | **0** | **0** | **0** |

Expanded Form of Numbers:

The expanded form of a number is given by the sum of the place values of its digits, in the hundreds, tens and one's place.

Example: Consider the number 453.

Solution:

H	T	O
4	5	3

From the above table,

Value of 3 is 3 × 1 = 3

Value of 5 is 5 × 10 = 50

Value of 4 is 4 × 100 = 400

Expanded form of 453 = 400 + 50 + 3

Standard Form Or Short Form:

The short form or standard form of a number is given by combining the face value of each digit at the correct places.

Example: 300 + 70 + 4 = 374

300 $\longrightarrow$ The place value is 3 hundreds, so it is placed at the hundreds place.

70 $\longrightarrow$ The place value is 7 tens, so it is placed at the tens place.

4 $\longrightarrow$ The place value is 4 ones, so it is placed at the ones place.

Number Names and Numerals:

To write the three digit numbers, first write the number name of the digit at the hundreds place, and then the last two digits together.

In this way, we can observe and learn to write the numbers and their number names.

- Seven hundred twenty four - 724

- Nine hundred forty two - 942

- Six hundred twelve - 612

- Two hundred two - 202.

Numbers On The Abacus:

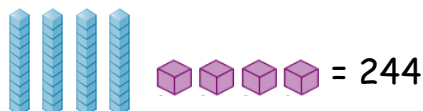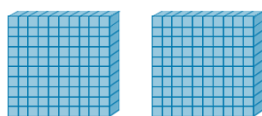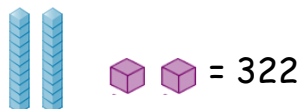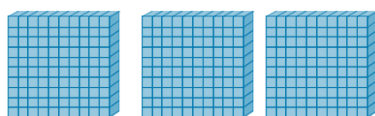The following numbers are shown by the beads on the abacus.

a)

H	T	O
2	3	1

b)

H	T	O
3	4	4
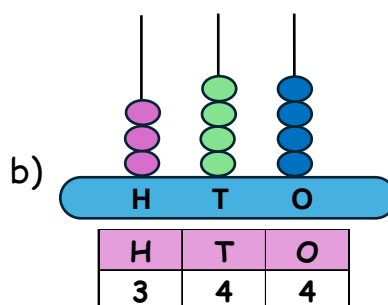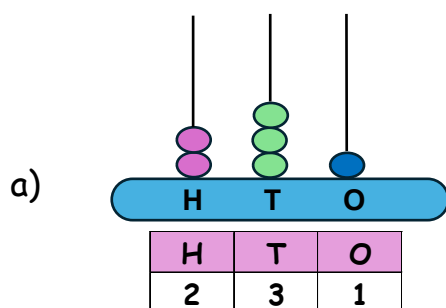
Comparing And Ordering:

Numbers Till 1000:

Write the sign , by looking at each pair of numbers.

= 100, = 10, = 1

= 322

= 244
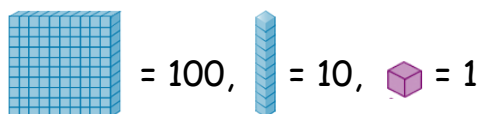
First, let us compare the hundreds 3 > 2

So, 322 is greater than 244

322 > 244

Making Numbers with The Given Digits:

Let us learn to make numbers from the given digits.

- For example, if the given numbers are 3, 5 and 8.

- We can make many 3 digit numbers.

Let us start with number 3 - 358 and 385

Then start with number 5 - 538 and 583

Then start with numer 8 - 835 and 853.

Thus the numbers formed are 358, 385, 538, 583, 835 and 853.

Greatest Number = 853,

Here, the greatest digit is at the hundreds place, the second greatest digit is at the tens place and the smallest digit is at the ones place.

Smallest Number = 358,

Here, the smallest digit is at the hundreds place, the second smallest digit is at the tens place, and the greatest digit is at the ones place.

Example:

How many 3-digit numbers can be made with the digits 5, 0, 4? Write the greatest and the smallest numbers formed?

Solution: If we start with number 5 we get numbers 504, 540

If we start with number 4 we get numbers 405, 450

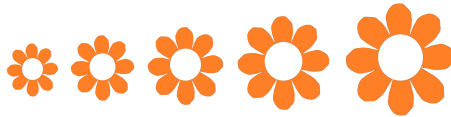We cannot start a number with 0, so we don't consider number 0.

Thus the numbers formed are 504, 540, 405, 450.

Greatest Number = 540, and the Smallest Number = 405.

Ascending and Descending Order:

Ascending Order:

When the numbers are written from the smallest to the biggest they are in increasing or ascending order.

Example: 123, 245, 312, 450, 690.

The above leaves are in ascending order i.e., smaller to bigger.

Descending Order:

When the numbers are written from the biggest to the smallest they are in decreasing or descending order.

Example: 745, 632, 550, 321, 108
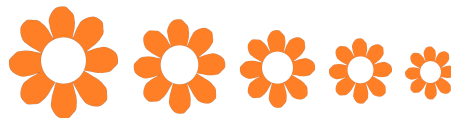

The above leaves are in descending order i.e., bigger to smaller.

Comparing the Numbers:

We use the following signs to compare the given numbers.

i) > means greater than.

ii) < means smaller than

iii) = means equal to

Symbols used for Comparision of Two Numbers:

1. **=**

   This is the "equal to" sign. When we use it between two numbers, it means that the numbers on both sides of the sign have the same value.
   Example: 51 = 51

2. **>**

   This is the "greater than" sign. It is placed between two numbers in such a way that the open side is towards the bigger number.
   Example: 46 > 32

3. **<**

   This is the "less than" sign. It is placed between two numbers in such a way that the closed side is towards the smaller number.
   Example: 52 < 67

Comparision of Numbers:

Rule 1: If a number has more digits than the other, then it is greater of the two. For example, 163 is greater than 35.

Example: 163 > 35

Rule 2: If two numbers have the same number of digits, the number with greater digit at the left most place is greater.

Example: 532 is greater than 432, i.e.,

532	>	432
5	>	4

Therefore, 532 > 432

Rule 3: If the left most digits are also the same. We go to next digit from left and compare the next digits to the right, and so on.

For example, in 786 and 783

7 = 7

And 8 = 8

But, left most digit 6 > 3.

Therefore, 786 > 783.

Successor of a Number:

The number that comes just after a given number is called its successor.

Example: The successor of a number is abtained by adding 1 to that number.

Predecessor of a Number:

The number that comes just before particular number is called its predecessor. So, we can find out the predecessor of a number by subtracting 1 from the number.

Example: The predecessor of 135 = 135 - 1 = 134.

Even Numbers:

The numbers that have 2, 4, 6, 8 and 0 in the ones place are called even numbers.

Example: 4, 8, 10, 32, 160, 496 are even numbers.

Odd Numbers:

The numbers that have 1, 3, 5, 7 and 9 in the ones place are called odd numbers.

Example: 3, 41, 49, 193 are odd numbers.

Properties of Odd and Even Numbers:

1. When we add even number to an odd number the answer is always an odd number

Example: 7 + 8 = 15

odd + even = odd

2. When we add odd number to an odd number the odd number, the answer is always an even number.

Example: 5 + 9 = 14

odd + odd = even

3. When we add two even numbers the answer is always an even number.

Example: 6 + 4 = 10

even + even = even

LEVEL 1

1. Write the odd numbers in between 87, 74, 31, 86, 53, 40.

   A) 87, 31, 53

   B) 53, 40

   C) 86, 53, 87, 31, 87

   D) 74, 31, 53, 40

2. Write the odd numbers between 16 and 22:

   A) 17, 19, 21

   B) 18, 22, 21, 20

   C) 16, 18, 20

   D) 21, 20, 18

3. Look at the pattern and complete the series 45, 50, 55, 60, ___, ___, ___, ___.

   A) 80,75,80,85

   B) 65,70,75,80

   C) 60,70,80,95

   D) 75,65,85,70

4. Write the even numbers between 77 and 83:

   A) 80, 79

   B) 77, 79, 80

   C) 77, 83, 79, 80

   D) 78, 80, 82

5. Complete the following 7 tens and 9 ones = ___ ?

   A) 56   B) 63

   C) 58   D) 79

6. Write the numbers between 75 ___ 85?

   A) 76,77,78,79,80,81,82,83,84

   B) 75,76,77,78,79,80,81,82,83

   C) 76,77,78,79,80,81,83,84,85

   D) 75,76,77,78,79,80,81,83,84

7. Arrange the number in ascending order:

   320, 410, 210, 130 _____

   A) 410, 210, 130, 320

   B) 410, 320, 210, 130

   C) 130, 210, 320, 410

   D) 210, 410, 130, 320

8. Which is the place value of 3 in 3 2 5?

   A) 200   B) 500

   C) 100   D) 300

9. 7 hundreds _____ tens.

   A) 70   B) 60

   C) 80   D) 77

10. Observe the pattern and fill in the blanks to complete the series 3, 6, 9, _____,____,_____,_____.

    A) 12, 15, 18, 21

    B) 12, 15, 17, 20

    C) 11, 15, 18, 20

    D) 19, 21, 25, 28

11. Write the odd numbers between 620 and 630 _____

    A) 620, 622, 624, 626, 628

    B) 621, 623, 625, 627, 629

    C) 621, 622, 624, 625, 626

    D) 622, 623, 624, 626, 628

12. The short form of 200 +30 + 5 = _____.

    A) 325   B) 532

    C) 532   D) 235

13. The number name for 542 is ____.

    A) Five hundred and forty two

    B) Two hundred and forty five

    C) Two hundred and fifty four

    D) Four hundred and fifty two

14. What number replaces question mark in the following?

Before	Between	After
849	?	851

    A) 800   B) 850

    C) 900   D) 949

15. Which number has the greatest value in the hundreds place ?
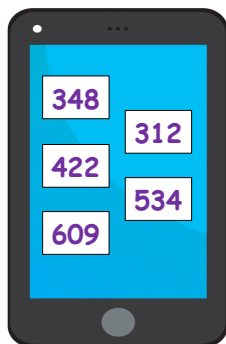
    A) 294   B) 682

    C) 970   D) 816

16. One hundred is same as:

    A) 0 tens 10 ones

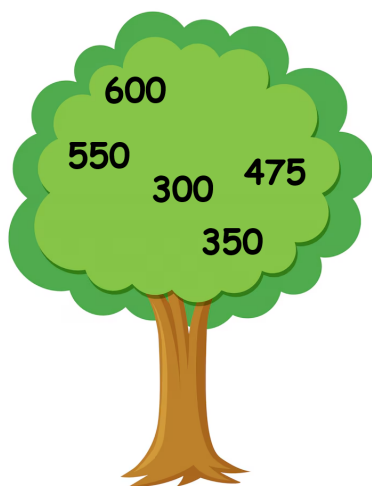   B) 1 tens 10 ones

    C) 10 tens 0 ones

    D) 100 tens 0 ones

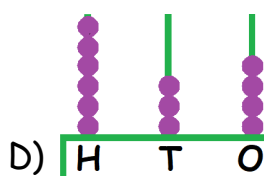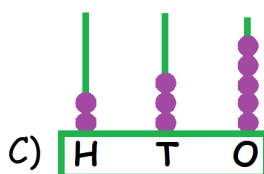**17.** Which of the following number names shows the numbers on the cellphone?
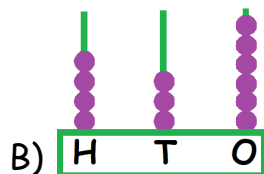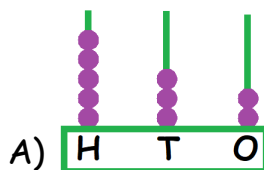

A) Three hundred thirty four

B) Four hundred forty eight

C) Five hundred twelve

D) Six hundred nine

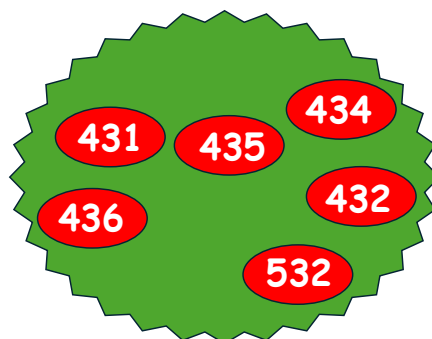**18.** Which number is more than 400 but less than 500 present on the tree?

A) 300   B) 475

C) 550   D) 600

19. Which abacus shows 436?

A) H T O

B) H T O

C) H T O

D) H T O

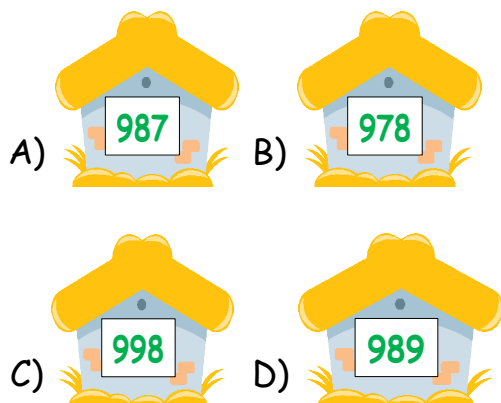**20.** Which of the following does not belong to the collection of numbers?

A) Four hundred thirty one

B) Five hundred thirty four
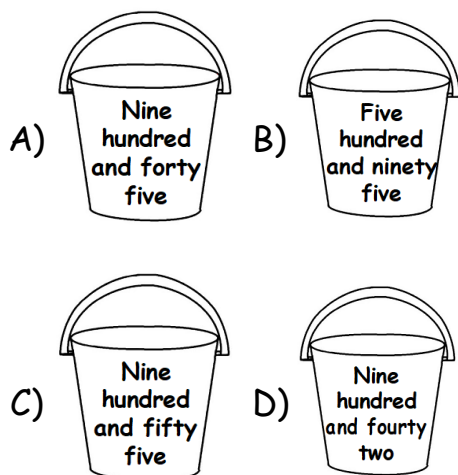
C) Five hundred thirty two

D) Four hundred thirty two

21. When written in words, 809 is same as _____.

A) Eighty and nine

B) Eight hundred and nine

C) Eight hundred and ninety

D) Eight zero and nine

22. Which house has the greatest number?

A) 987   B) 978

C) 998   D) 989

23. Which basket shows the number given below? 945

A) Nine hundred and forty five

B) Five hundred and ninety five

C) Nine hundred and fifty five

D) Nine hundred and fourty two

24. Which of the following correctly shows increasing order of the following set of numbers?

531   508   599   516

A) 508, 516, 531, 599

B) 508, 516, 599, 531

C) 531, 516, 599, 508

D) 508, 599, 516, 531

25. Which of the following set of numbers are arranged in decreasing order?

A) 571, 579, 597, 578

B) 597, 579, 578, 571

C) 579, 597, 578, 571

D) 578, 571, 597, 579

LEVEL 2

26. Arrange in descending order: 43, 53, 73, 33

A) 53, 33, 43, 73

B) 53, 43, 33, 73

C) 73, 53, 43, 33

D) 33, 53, 73, 43

27. Arrange the following numbers in descending order:

869, 965, 458, 751

A) 965, 869, 751, 485

B) 751, 869, 965, 458

C) 485, 751, 869, 965

D) 458, 751, 869, 965

28. A boy has drawn a ball from a bag containing balls numbered from 1 to 100. It is found to be 19 more than the least two digit number. What is the number ?

A) 10   B) 19

C) 29   D) 99

29. Golu wrote a number on the black board i.e.,

6 _____ 9

If it is formed from three different digits, then which number could be placed in the gap to make it the biggest number ?

A) 0   B) 5

C) 9   D) 8

30. The number having "3" in the hundreds place, "5" in the ones place and "2" in the tens place:

A) 352   B) 532

C) 253   D) 325

31. Which of the following statement is correct ?

A) 321 < 235   B) 420 > 510

C) 725 < 638   D) 827 > 639

32. Find the missing number from the following:

597 = 500 + _____ × 10 + 7

A) 597   B) 97

C) 90   D) 9

33. Sum of the place values of 4 and 2 in 234 is:

A) 42   B) 24

C) 204   D) 6

34. Look at these numbers:

1 3 5 7 9 2 4 6 0 8

Which number is located in fifth place from the right?

A) 9   B) 5

C) 2   D) 4

35. Which of the following numbers is the second largest in the given group?
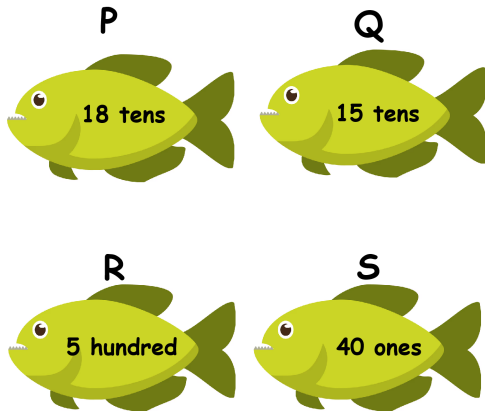
595, 600, 795, 825, 123

A) 595   B) 825

C) 795   D) 123

36. Which of the following is less than 50 tens?

A) 500   B) 400

C) 550   D) 600

37. Which fish shows the largest value?

P — 18 tens
Q — 15 tens
R — 5 hundred
S — 40 ones

A) P   B) Q

C) R   D) S

38. Jyoti has the set of number cards ⟦2⟧⟦6⟧⟦4⟧ which is the greatest possible 3-digit number that can be formed by using all the cards each only once?

A) 624

B) 642

C) 462

D) 246

39. Suman arranges six beads in columns of a abacus. She puts three beads in ones column, 1 bead in tens column and 2 beads in hundreds column. Which of the following can be Suman's abacus?

A) H T O   B) H T O

C) H T O   D) H T O
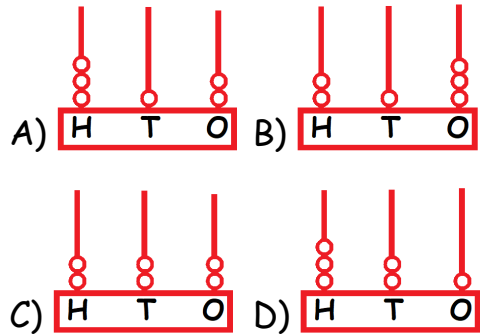
40. The below diagram shows the number of carrots eaten by each rabbit in a month. Which rabbit ate two hundred and six carrots?

Bunny 260   Piglu 396   Coco 286

Fluffy 206   Ginger 26
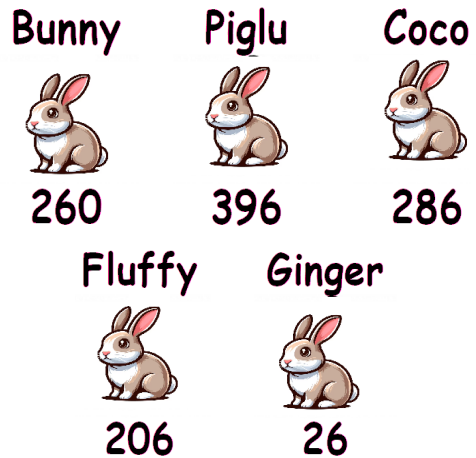
A) Both Bunny and Coco
B) Piglu
C) Fluffy
D) Both Ginger and Fluffy

LEVEL 3

41. Rajesh lost one of his chickens. Use the clues below to help him.

Clue 1: The digit in the ones place is 5.

Clue 2: The digit in the tens place is greater than the digit in the ones place.

Clue 3: The digit in the tens place is 7 more than the digit in the hundred place.

Mark the correct one:

A) 185   B) 26

C) 115   D) 375.

42. Write down the numbers from 1 to 25 one after the other. Which digit is on the 25th place ?

A) 7   B) 5

C) 3   D) 1

43. The greatest even number formed by the digit 3, 2 and 1 using the digits only once is:

A) 321   B) 312

C) 213   D) 132

44. Ruchi planted some plants in a garden. The number of plants planted by her is more than 340 and has 6 at the tens place. Which of the following cannot be the number of plants planted by her?

A) 368

B) 568

C) 864

D) 269

45. Which of the following statements is INCORRECT?

A) There are 3 ones in 423.

B) 900 ones is same as 90 tens.

C) The largest 3-digit number formed by using the digits 5, 9, 6 each only once is 956.

D) The place value of 6 in 678 is 600.

46. The following table shows the number of candies each child have.

Children	Number of Candies
Sapna	25 tens
Priya	5 tens 2 ones
Anurag	2 tens 5 ones
Shivam	52 ones

Which of the following statement is CORRECT?

A) Sapna has least number of candies.

B) Anurag has maximum number of candies.

C) Shivam has 25 candies.

D) Priya and Shivam has equal number of candies.

47. **Fill in the blanks.**

    i) One less than the smallest 3-digit number is P.

    ii) 35 tens = Q.
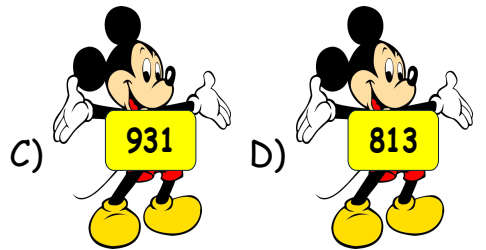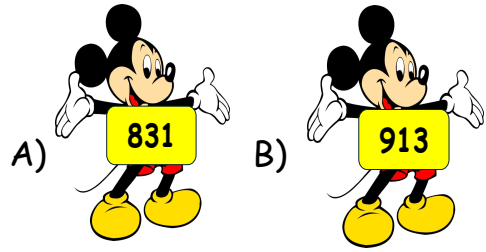
    iii) One hundred and eighty eight is same as R .

    A) P - 100, Q - 350, R - 180

    B) P - 999, Q - 35, R - 180

    C) P - 101, Q - 350, R - 188

    D) P - 99, Q - 350, R - 188

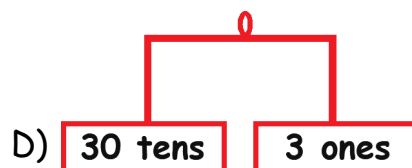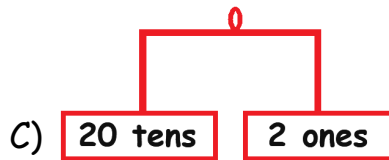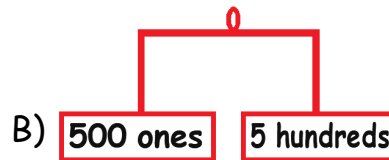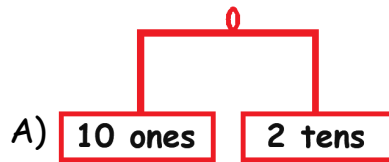48. **Navita lost her cat. Use the given clues to find Navita's cat.?**

    Clue 1: The digit at hundreds place is the largest one digit number.

    Clue 2: The place value of 1 in the number is 1.

    Clue 3: The place value of 3 in the number is 30.

A) 831

B) 913

C) 931

D) 813

49. **Which of the following balance is CORRECT?**

A) 10 ones | 2 tens

B) 500 ones | 5 hundreds

C) 20 tens | 2 ones

D) 30 tens | 3 ones

50. Arrange the given numbers in increasing order. ?

P: 6 hundreds + 8 ones

Q:1 hundred + 5 tens + 7 ones

R: 8 hundreds + 1 ones

S: 1 hundred + 7 tens + 5 ones

A) Q, S, R, P

B) Q, S, P, R

C) Q, R, S, P

D) R, P, S, Q