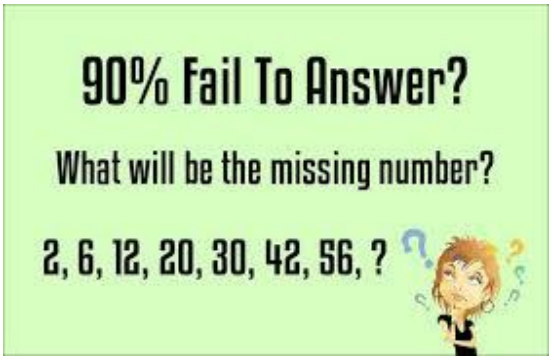
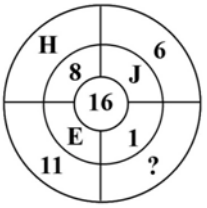
NUMBER SERIES

What is Number series??

Now a days most of you must be using facebook, whatsapp and other social media platforms and many of times we see questions like this



Or even in many exams like railway and SSC and many more exams in reasoning section we see questions like this



But wait we are not going to discuss all this. In this study note we are only going to discuss about number series which are asked in banking and insurance exams under quantitative aptitude section.

So lets start

Number Series- Number series is a order of numbers which are not arranged randomly but follow a pattern. Here in this not we weill understand how to identify which kind of pattern is following because without this it is next to impossible to have a command on number series.

Number series is a form of numbers in a certain sequence, where some numbers are mistakenly put into the series of numbers and some number is missing in that series, we need to observe first and then find the accurate number to that series of numbers.

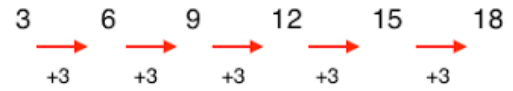
Scope in exams-Almost in every pre and mains exam of banking number series questions are asked in bunches of 5 questions and as we know now a days pre exams are conducted with time restrictions importance of number series becomes very high and they could be solved in very little time,

Different types of Number Series

There are some format of series which are very frequently asked in Exams.

Difference series-In this tytpe of series pattern can be find by using difference of terms.

If any pattern is found after first difference like sqare,cube or multiplication then this is called one tier series otherwise we need to proceed further and then it is call two tier series.



20 28 37 47 58 70

8 9 10 11 12

Fibonacci Series-In this kind of series next term is find out by adding previous number.

1 1 2 3 5 8 13 21

14 17 31 48 79 127

14+17=31 | 17+31=48 | 31+48=79 | 48+79=127

Prime Number series-In this kind of series next term is find out by adding, multiplying or dividing by prime numbers.

2 4 12 60 420 4620

Perfect Square Series

This Types of Series are based on **square** of a number which is in same order and one square number is missing in that given series.

480 525 572 621 672 725

22^2-4 23^2-4 24^2-4 25^2-4 26^2-4 27^2-4

$1^2 = 1 = 1$
$2^2 = 4 = 1 + 3$
$3^2 = 9 = 1 + 3 + 5$
$4^2 = 16 = 1 + 3 + 5 + 7$
$5^2 = 25 = 1 + 3 + 5 + 7 + 9$
$6^2 = 36 = 1 + 3 + 5 + 7 + 9 + 11$
$7^2 = 49 = 1 + 3 + 5 + 7 + 9 + 11 + 13$
$8^2 = 64 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15$
$9^2 = 81 = 1 + 3 + 5 + 7 + 9 + 11 + 13 + 15 + 17$
etc

Perfect Cube Series-

This Types of Series are based on **cube** of a number which is in same order and one **cube** number is missing in that given series.

2197 3375 4913 6859 9261

13^3 15^3 17^3 19^3 21^3

Ration Series

This type of series are based on ration series, where sequence are in form of ratio in difference between the numbers. All numbers are arranged in ratio sequence order.

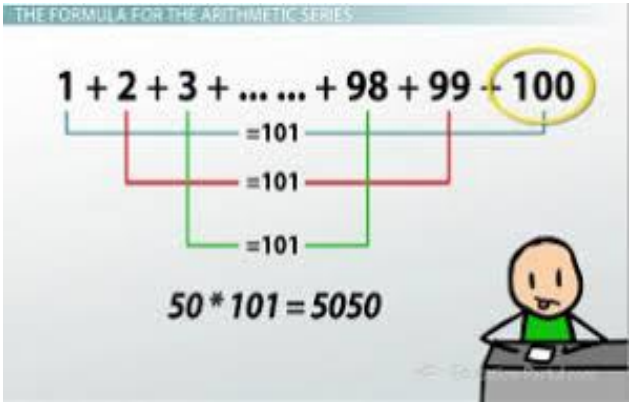
4096 5120 6400 8000 10000

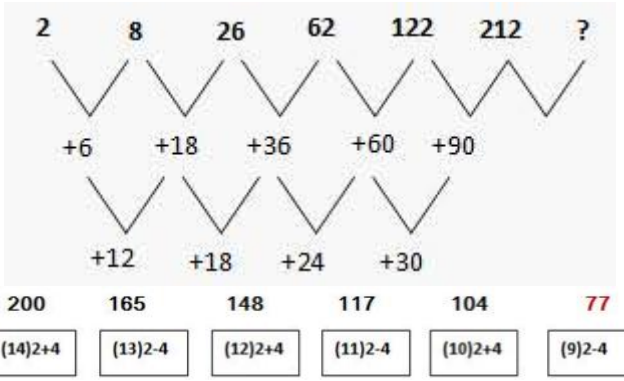
Here ratio between each consecutive term is 4:5 or we can say next term can be found by multiplying 5/4 to previous term.

Mixed Series

This series is most important and asked in exam more frequently than any other pattern.

Mixed Number series is a arrangement of numbers in a certain order. How you know that the given series is mixed series, notice that this **type of series are more then one different order which arranged in alternatively in a single series or created according to any non-conventional rule.**





200 165 148 117 104 77

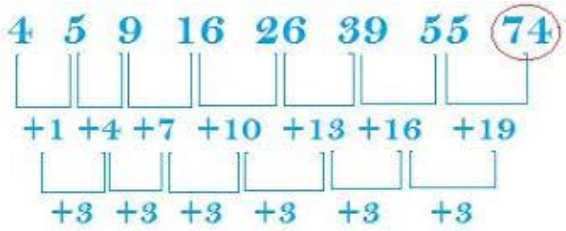
(14)2+4 | (13)2-4 | (12)2+4 | (11)2-4 | (10)2+4 | (9)2-4

In mixed Series a mixed number is a combination of number in another way it is not a sequential number series number that you have arranged. In example 1, 111, 220, 438, ?, 1746 where you need to count them in a one step or two step calculation for obtain the difference common result according with the series of mixed numbers .

Type of questions asked in exam-

Missing number:

In this type of series one number is missing in given series. Such type of series, find the given pattern and find the missing number. Generally this kind of series is asked in pre exams.

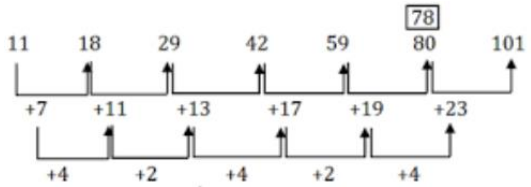


Wrong Number Series:

In this type of series one number is odd man out. Which does not follow the sequence.

Generally this kind of series is asked in mains exams.

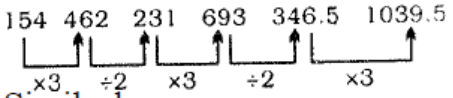
Note-



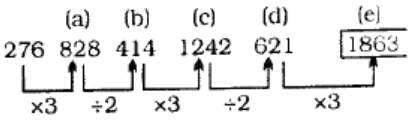
Coding Decoding Series:

In this type of series firstly one series is given and with the help of first series next number of second series is to be find out.

Generally this kind of series is asked in relatively tough exams like SBI PO mains and other. They are treated as most tough number series.



Similarly,



How to proceed number series-

Examine the difference between adjacent numbers

If series is increasing find its rate means how fast or how slow the series is increasing.

First of all you need to check logical series i.e. whether difference is square or cube or close to it. For example difference may be $2^2+1,3^2+2,4^2+3$ and so on.

If it is increasing slowly reason may be addition hence find the difference and then solve.

If it is increasing very fast reason may be multiplication. start from last end and get how many times last term is from previous term and if there is any difference then try to find pattern by moving leftward and solve.

If it is decreasing slowly reason may be difference hence find the difference and then solve.

If it is decreasing very fast reason may be division, start from last end and get how many times last term is from previous term and if there is any difference then try to find pattern by moving leftward and solve.

If the terms are increasing and decreasing alternatively reason may be addition and subtraction so you need to find difference and then try to solve

If you still not able to find any pattern better go and try other series.

Generally in exams one or two questions are given very tough and most of question follow very common pattern which you studied in your classrooms so you should need to try to find those type of questions.