Recursion Problems for Begineers

problem 1:You will be given an array of integers, write a recursive solution to print it in reverse order.
Input:
5
69 87 45 21 47
Output:
47 21 45 87 69
problem 2:Write a recursive function to print an array in the following order.
[0] [n-1]
[1] [n-2]
.....
.....
[(n-1)/2] [n/2]
Input:
5
1 5 7 8 9
Output:
1 9
5 8
7 7
problem 3:Write a recursive program to remove all odd integers from an array.
You must not use any extra array or print anything in the function.
Just read input, call the recursive function, then print the array in main().
Input:
6
1 54 88 6 55 7
Output:
54 88 6

problem 4:Write a recursive solution to print the polynomial series for any input
n:1 + x + x2 + ... + xn-1
Input:
5
Output:
1 + x + x^2 + x^3 + x^4

problem 5 :Write a recursive solution to find the Summation of 1 to n
Input :
5
Output :
15

problem 6:Write a recursive program to compute n!
Input:
5
Output:
120

problem 7:Write a recursive solution to evaluate the previous polynomial for any given x and n. Like, when x=2 and n=5, we have 1 + x + x2 + ... + xn-1 = 31
Input:
2 5
Output:
31

problm 8:Write a recursive program to compute nth fibonacci number. 1st and 2nd fibonacci numbers are 1, 1.
Input:
6
Output:
8

problem 9:Write a recursive program to determine whether a given integer is prime or not.
Input:
49
999983
1
Output:
not prime
prime
not prime

problem 10:You will be given an array of integers, write a recursive solution to print it in reverse order.
Input:
5
69 87 45 21 47
Output:
47 21 45 87 69

problem 11:Suppose you are given an array of integers in an arbitrary order. Write a recursive solution to find the maximum element from the array.
Input:
5
7 4 9 6 2
Output:
9

problem 12:Write a recursive solution to find the second maximum number from a given set of integers.
Input:
5
5 8 7 9 3
Output:
8
problem 13:Implement linear search recursively, i.e. given an array of integers, find a specific value from it.
Input format: first n, the number of elements. Then n integers. Then, q, number of query, then q integers.
Output format: for each of the q integers, print its index (within 0 to n-1) in the array or print 'not found', whichever is appropriate.
Input:
5
2 9 4 7 6
2
5 9
Output:
not found
1
problem 14:Implement binary search recursively, i.e. given an array of sorted integers, find a query integer from it.
Input format: first n, the number of elements. Then n integers. Then, q, number of query, then q integers.
Output format: for each of the q integers, print its index (within 0 to n-1) in the array or print 'not found', whichever is appropriate.
Input:
5
1 2 3 4 5
2
3 -5
Output:
2
not found

problem 15:Write a recursive solution to get the reverse of a given integer. Function must return an int
Input:
123405
Output:
504321

problem 16:Write a recursive solution to get the reverse of a given integer. Function must return an int
Input:
123405
Output:
504321

problem 17:Write a recursive program that determines whether a given sentence is palindromic or not
just considering the alpha-numeric characters ('a'-'z'), ('A'-'Z'), ('0'-'9').
Input:
madam, I'm adam
hulala
Output:
palindromic
not palindromic

problem 18:Implement strcat() strlen() recursively.
Input:
test on your own
Output:
test on your own

problem 19:Write a recursive solution to compute lcm of two integers. You must not use the formula lcm(a,b) = (a x b) / gcd(a,b); find lcm from scratch...
Input:
23 488
Output:
11224

problem 20:Tree traversal Preorder inorder postorder