Recursion and Pointer

1. Take a number as input and repeatedly sum all the digits until a single digit is counted. E.g. id= 98347989, sum= 57, sum=12, sum=3. Answer=3.
2. Write a program to find the Greatest Common Divisor (GCD) of two numbers.
3. Take a string as input and check whether it is Palindrome or not. A palindrome is a word, number, phrase, or a sequence of characters that reads the same backward as forward, such as madam or racecar.
4. Write a program which will take a floating point number as input and call the function ***void breakFloating(float f, int *intPart, int *fracPart)*** which will separate the integer part and fractional part of that floating point number and print those number (which are now stored in two integer variables) in main function.
5. Write a function that uses a pointer to copy an array of size n. The data type of the array should be double. You can take input from the user, or you can use random variables.
6. Write a function that will receive a pointer to an array of floats of length n. The function will return the address of the maximum value in the array.
7. Write a program that will create a dynamically created 1D array of length n (given by the user) and store first n odd numbers in it. Try printing the size of the array using sizeof() function. Are you satisfied with the result of sizeof() function? If no, explain why?