Can U C (LEVEL #1)

Q1.) A number of “Cats” got together and decided to kill between them 999919 mice. Every cat killed equal number of “mice”. Write a program to find how many number of cats were there.

Q2.) Write a program that accepts a decimal number from the user and displays the equivalent number in the Roman Number system.

Q3.) Write a program that simulates the UNDO operation(For example if there is some text present on screen then remove the text from the screen and then by undoing your last operation bring back that text on the screen).

Note: You are not allowed to use Files and "graphics.h" in your program.

Q4.) An integer substring of an integer is formed by consecutive digits of the original integer. For example, the number 6158 contains the substrings 6, 1, 5, 8, 61, 15, 58, 615, 158, and 6158.

Write a program that accepts any integer from the user and displays that **largest** substring of the integer which is also a prime.

Example:

Input 2319

Output 31

Q5.) If a certain container contains just one bacterium on the first day and there are twice as many on the next day. In this manner the number of bacteria in the container doubles itself every day. Assuming that the container would be full on the 10th day with 13,312 bacteria, find the number of bacteria that were initially in the container on the first day.

Q6.) Write a program which accepts a positive number from user and displays its square root.

Note: You are not allowed to use "math.h" and sqrt() function in your program. Only use the simple mathematical operators.

Q7.) Write a program which produces its own source code as output.

Q8.) Consider the string ‘AAAABCCCCCDDDD’ consisting of alphabetic characters only. This string is of length 14. Since the string consists of alphabetic characters only, duplicate characters can be removed and replaced with a duplication factor n. With this technique the string can be compressed and represented by ‘4AB5C4D’.The compressed string is of length 7. Write a program which takes a string in compressed form and recreates the original uncompressed string.

Note: The string will be of the format ‘nA...’ where n, the duplication factor, is an integer between 2 and 99 and A is an uppercase alphabetic character.

Example 1:

Input: 3A4B7D

output: AAABBBBDDDDDDD

Example 2:

Input: 2BA3C

Output: BBACCC

(note that if n=1 then it may or may not be explicitly specified)