ASM Homework 3

There are three problems in homework 3. For each of them, please read the description and requirement carefully, and design a program to solve it with the specified I/O format.

Problem 1: Prime?

Determine whether the given integer n is a prime or not. $(2 \leq n < 2^{15})$

I/O Format

Input is a line that contains the integer n. You should output a string "Yes" if n is a prime, otherwise output "No".

I/O Example 1

5

Yes

I/O Example 2

8

No

Problem 2: Coprime?

Determine whether the given two integers m and n are coprime or not. $(2 \leq m, n < 2^{15})$

I/O Format

Input are two lines that contain the integers m and n respectively. You should output a string "Yes" if m and n are coprime, otherwise output "No".

I/O Example 1	I/O Example 2
3	12
4	8
Yes	No

Problem 3: Recursion

Solve the following recursive function with the given integer n. $(0 \leq n \leq 50)$

$$f(n) = \begin{cases} 0, \text{if } n \leq 3 \\ f(n-3) + f(n-4) + 7, \text{if } n > 3 \end{cases}$$

I/O Format

Input is a line that contains the integer n. You should output the value of $f(n)$.

I/O Example 1	I/O Example 2
2	10
0	28

Grading

- Problem 1 & 2: 30% for each
  - Get 0% if always says "Yes" or "No".
- Problem 3: 40%
  - Get 20% for non-recursive method and 0% for hard-coded.

File Naming

Please name your source code files as following:

***StudentID_ProblemNum*.asm**

For example, "0186027_1.asm", "0186027_2.asm" and "0186027_3.asm".

Requirements

1. The testing environment is Microsoft Visual Studio 2010, so make sure that your program can correctly run on it.
2. Submit the three source code files (.asm) on the E3 platform.
3. The deadline is 2013/5/5 (Sun.) 23:59, no late work will be accepted.
4. DO NOT PLAGIARIZE, or you will get ZERO in this work.