C Language Programming: Homework #5
Assigned on 11/22/2016(Thursday), Due on 11/29/2016(Thursday)

Description:
1. Compute \((g+g)\%n\) and \(g\times g\%n\) when \(g\) and \(n\) are unsigned integers?

2. Let \(g\), \(h\), \(n\) be unsigned integers, define \(x \equiv g^h \mod n\), where \(x\) is the remainder of \(g^h\) divided by \(n\). This problem asks you to write a fast program to compute \(x\) with given \(g\), \(h\), and \(n\). You have to consider if the temporary results you compute can be stored in the variables of type unsigned int. Some of the sample inputs for \(g\), \(h\), and \(n\) are as follows: \(2\), \(7\), \(127\) | \(3\), \(4\), \(7\) | \(22\), \(1234567\), \(4097\) | \(25\), \(4194303\), \(32767\) | \(31\), \(67108863\), \(65535\)

注意大數問題!!!!我們一定會測，這是這次作業的重點
不會測g h n overflow的情況

Command Line:
輸入格式：
./hw5_1 (0 for add, 1 for multiplication) g n

Ex. ./hw5_1 0 3 4
Output : ans = 2

./hw5_2 g h n

Ex. ./hw5_2 5 2 4
Output : ans = 1

Score:
Hw5_1 : 40%(20% unsigned int範圍內運算, 20% overflow處理)
Hw5_2 : 40%(20% unsigned int範圍內運算, 20% overflow處理)
Report : 20%

範例answer : 
2, 7, 127 => 1
3, 4, 7 => 4
22, 1234567, 4097 => 1863
25, 4194303, 32767 => 15625
31, 67108863, 65535 => 63421