Problem #1
(10 marks)
Maclaurin Series

In this problem, your input is a real number x. You need to apply Maclaurin series expansion to compute the value of e^{-x}. Use the first 10 terms from the infinite series. Print 6 digits after the decimal point in your output. Recall that, the expansion is as follows:

$$e^{-x} = \sum_{0}^{\infty} (-1)^n \frac{x^n}{n!}$$

Use of library functions other than scanf and printf is prohibited. See the following example:

Sample Input(s)	Corresponding Output(s)
1 2 3	0.367879 0.135335 0.049787

Problem #2
(10 marks)

Write a program that takes as input two integers and prints the number of common factor between those two integers.

Note: The factors of 20 are 1, 2, 4, 5, 10, 20. And the factors of 12 are 1, 2, 3, 4, 6, 12. So the number of common factors of 12 and 20 is 3.

Sample Input(s)	Corresponding Output(s)
12 24 7 36 12 20	5 1 3