<Advanced C Programming and Lab>
Ch 13

※ Note

- If not mentioned, assume that there is no additional inputs.

- <u>If not mentioned, do not print a space in the beginning and end of each line.</u>

- In input and output examples, after ↦ symbol is to explain the input and output.

- In output examples, □ symbol indicates a space.

Section2 [Problem 1] Receive two positive integers. Print the greatest common denominator (GCD) of the two integers. Must implement as a recursive function.

Input Example 1	Output Example 1
366 60	6

Hint: use Euclidean algorithm

(Ex) Input (12, 8)   step1 (8, 12%8=4)   step2 (4, 8%4=4) step3 (4, 4%4=0), GCD is 4

Section2 [Problem 2] Euler's number e is the base of the natural logarithm. We can approximate the number as follows. Write a program to compute Euler's number.

 - Display the result using 6 decimal points.

$$e = 1 + \frac{1}{1!} + \frac{1}{2!} + \frac{1}{3!} + \frac{1}{4!} + \cdots + \frac{1}{n!}$$

Input Example 1	Output Example 1
30 ↦ n	2.718282

Hint: Define and use a function factorial( )

      factorial() should be implemented as a recursive function