Introduction to C++

A. Hello World

1 second, 256 megabytes

Your task is to print the string `Hello World`.

Input

There is no input for this problem.

Output

Print exactly:

```
Hello World
```

input
There is no input.
output
Hello World

B. Print First 5 Alphabets

1 second, 256 megabytes

Your task is to print the first five letters of the English alphabet.

Input

There is no input for this problem.

Output

Print the first five uppercase English letters, one per line.

input
There is no input.

output
A B C D E

C. Triangle

1 second, 256 megabytes

Your task is to print a right-angled triangle pattern using asterisks (`*`).

Input

There is no input for this problem.

Output

Print the following pattern exactly as shown:

```
*****
****
***
**
*
```

input
There is no input.

output
***** **** *** ** *

D. Print Z

1 second, 256 megabytes

Your task is to print the letter `Z` using asterisks (`*`) as shown below.

Input
There is no input for this problem.

Output
Print the following pattern exactly as shown:

```
*****
    *
   *
  *
*****
```

input
There is no input.
output
| ```
*****
    *
   *
  *
*****
``` |

E. Print Table of 5

1 second, 256 megabytes

Your task is to print the multiplication table of the `5`.

Input
There is no input for this problem.

Output

Print the table of 5 in the format as shown in the example.

input
There is no input.
output
| ```
5 * 1 = 5
5 * 2 = 10
5 * 3 = 15
5 * 4 = 20
5 * 5 = 25
5 * 6 = 30
5 * 7 = 35
5 * 8 = 40
5 * 9 = 45
5 * 10 = 50
``` |

F. Rectangle

1 second, 256 megabytes

You are given the length and breadth of a rectangle. Your task is to calculate its area and perimeter.

The formulas are:

- Area = length × breadth
- Perimeter $= 2 \times (\text{length} + \text{breadth})$

Input
A single line containing two integers `length` and `breadth` $(1 \leq \texttt{length}, \texttt{breadth} \leq 1000)$.

Output
You are given the length and breadth of a rectangle. Your task is to calculate its area and perimeter.

The formulas are:

- Area = length × breadth
- Perimeter $= 2 \times (\text{length} + \text{breadth})$

input

5 7

output

Area = 35
Perimeter = 24

G. Print Table of N

1 second, 256 megabytes

You are given an integer N. Your task is to print the multiplication table of N from 1 to 10.

Input
A single integer N $(1 \leq N \leq 100)$.

Output
Print the table of N in the format shown in the example below.

input

6

output

6 * 1 = 6
6 * 2 = 12
6 * 3 = 18
6 * 4 = 24
6 * 5 = 30
6 * 6 = 36
6 * 7 = 42
6 * 8 = 48
6 * 9 = 54
6 * 10 = 60

H1. Calculator

1 second, 256 megabytes

You are given two integers N and M. Your task is to compute and print the results of the following operations:

- $N + M$
- $N - M$
- $N \times M$
- $N \div M$ (integer division)
- $N \bmod M$

Input
A single line containing two integers N and M $(1 \leq N, M \leq 1000)$.

Output
Print five lines in the format as shown in the example.

input

6 4

output

6 + 4 = 10
6 - 4 = 2
6 * 4 = 24
6 / 4 = 1
6 % 4 = 2

H2. Calculator - II

1 second, 256 megabytes

You are given two integers N and M. Your task is to compute and print the results of the following operations:

- $N + M$
- $N - M$
- $N \times M$
- $N \div M$ (integer division)
- $N \bmod M$

Input

Two integers N and M, each given on a separate line $(1 \leq N, M \leq 10^9)$.

Output

Print five results in the following format as shown in the example.

input
1000000000 1000000000
output
1000000000 + 1000000000 = 2000000000 1000000000 - 1000000000 = 0 1000000000 * 1000000000 = 1000000000000000000 1000000000 / 1000000000 = 1 1000000000 % 1000000000 = 0

I. Add Last Digits

1 second, 256 megabytes

You are given two integers N and M. Your task is to find the sum of the last digits of N and M.

Input

A single line containing two integers N and M $(1 \leq N, M \leq 1000)$.

Output

Print a single integer — the sum of the last digits of N and M.

input
169 125
output
14

J. Even or Odd

1 second, 256 megabytes

You are given an integer N. Your task is to determine whether the number is even or odd.

Input

A single integer N $(1 \leq N \leq 10^9)$.

Output

- `Even` if N is even
- `Odd` if N is odd

input
20
output
Even

input
3
output
Odd

K. Factor

1 second, 256 megabytes

You are given two integers N and F. Your task is to check whether F is a factor of N.

A number F is said to be a factor of N if N is divisible by F.

Input

A single line containing two integers N and F $(1 \leq N, F \leq 10^9)$.

Output

Print:

- `Yes` if F is a factor of N
- `No` otherwise

input
36 6
output
Yes

L. Multiple

1 second, 256 megabytes

You are given two integers N and M. Your task is to check whether M is a multiple of N.

A number M is said to be a multiple of N if M is divisible by N.

Input
A single line containing two integers N and M $(1 \leq N, M \leq 10^9)$.

Output
Print:

- `Yes` if M is a multiple of N
- `No` otherwise

input
6 36
output
Yes

M. Pass or Fail

1 second, 256 megabytes

You are given the marks obtained by a student. Your task is to check whether the student has passed or failed.

A student is considered to have passed if the marks obtained are at least 35.

Input
A single integer `marks` $(0 \leq \text{marks} \leq 100)$.

Output
Print:

- `Pass` if the student has passed
- `Fail` otherwise

input
36
output
Pass

input
20
output
Fail

N. Max and Min of 2 Numbers

1 second, 256 megabytes

You are given two integers A and B. Your task is to find the minimum and maximum among them.

Input
A single line containing two integers A and B $(1 \leq A, B \leq 10^9)$.

Output
Print two lines:

- `Min = X`
- `Max = Y`

where X is the minimum value and Y is the maximum value.

input
12 9
output
Min = 9 Max = 12

O. Max and Min of 3 Numbers

1 second, 256 megabytes

You are given three integers A, B, and C. Your task is to find the minimum and maximum among them.

Input
A single line containing three integers A, B, and C
$(1 \le A, B, C \le 10^9)$.

Output
Print two lines:

- `Min = X`
- `Max = Y`

where X is the minimum value and Y is the maximum value.

input
12 9 15
output
Min = 9 Max = 15

P. Student Performance Evaluation

1 second, 256 megabytes

You are given the marks obtained by a student. Based on the marks, display an appropriate performance message according to the following rules:

- If marks are greater than 90, print `Excellent`
- Else if marks are greater than 80 and less than or equal to 90, print `Good`
- Else if marks are greater than 70 and less than or equal to 80, print `Fair`
- Else if marks are greater than 60 and less than or equal to 70, print `Meets Expectations`
- Else (marks less than or equal to 60), print `Below Par`

Input
A single integer `marks` $(0 \le \texttt{marks} \le 100)$.

Output
Print a single line containing the performance message corresponding to the given marks.

input
85
output
Good

input
99
output
Excellent

Q. Find the location point

1 second, 256 megabytes

You are given the coordinates of a point (X, Y) on a Cartesian plane. Your task is to determine the location of the point.

The possible locations are:

- `Origin` — if $X = 0$ and $Y = 0$
- `X axis` — if $Y = 0$ and $X \neq 0$
- `Y axis` — if $X = 0$ and $Y \neq 0$
- `1st Quadrant` — if $X > 0$ and $Y > 0$
- `2nd Quadrant` — if $X < 0$ and $Y > 0$
- `3rd Quadrant` — if $X < 0$ and $Y < 0$
- `4th Quadrant` — if $X > 0$ and $Y < 0$

Input

A single line containing two integers X and Y $\left(-10^9 \leq X, Y \leq 10^9\right)$.

Output

Print a single line indicating the location of the point.

input
1 10
output
1st Quadrant

input
0 0
output
Origin