1. Orders

Write a method that calculates the total price of an order and prints it on the console. The method should receive one of the following products: coffee, coke, water, snacks; and a quantity of the product. The prices for a single piece of each product are:

- coffee – 1.50
- water – 1.00
- coke – 1.40
- snacks – 2.00

Print the result formatted to the second decimal place

Example

Input	Output
water 5	5.00
coffee 2	3.00

Hints

1. Read the first two lines
2. Create a method the pass the two variables in
3. Print the result in the method

2. Add and Subtract

You will receive 3 **integers.** Write a method **Sum** to get the sum of the first two integers and **Subtract** method that subtracts the third integer from the result from the Sum method.

Examples

Input	Output
23 6 10	19
1 17 30	-12
42 58 100	0

3. NxN Matrix

Write a method that receives a single integer **N** and prints **NxN** matrix with that number.

Examples

Input	Output

3	3 3 3 3 3 3 3 3 3
7	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
2	2 2 2 2

4. Data Types

Write a program that, depending on the first line of the input, reads an **`int`**, **`double`** or **`string`**.

- If the data type is **`int`**, multiply the number by 2.
- If the data type is **`real`**, multiply the number by 1.5 and format it to the second decimal point.
- If the data type is **`string`**, surround the input with "$".

Print the result on the console.

Examples

Input	Output
int 5	10
real 2	3.00
string hello	$hello$

Hint

Try to solve the problem using only one method with different overloads.

5. Center Point

You are given the coordinates of two points on a Cartesian coordinate system - X1, Y1, X2 and Y2. **Create a method** that prints the point that is closest to the center of the coordinate system (0, 0) in the format (X, Y). If the points are on a same distance from the center, print only the first one.

Examples

Input	Output
2 4 -1 2	(-1, 2)

6. Longer Line

You are given the coordinates of four points in the 2D plane. The first and the second pair of points form two different lines. Print the longer line in format "**(X1, Y1)(X2, Y2)**" starting with the point that is closer to the center of

the coordinate system (0, 0) (You can reuse the method that you wrote for the previous problem). If the lines are of equal length, print only the first one.

Examples

Input	Output
2 4 -1 2 -5 -5 4 -3	(4, -3)(-5, -5)

7. Tribonacci Sequence

In the **"Tribonacci" sequence**, every number is formed by the **sum of the previous 3**.

You are given a number **num**. Write a program that prints **num** numbers from the Tribonacci sequence, each on a new line, starting from 1. The input comes as a parameter named **num**. The value **num** will always be positive integer.

Examples

Input	Output
4	1 1 2 4

Input	Output
8	1 1 2 4 7 13 24 44

8. Multiplication Sign

You are given a number **num1**, **num2** and **num3**. Write a program that finds if **num1 * num2 * num3** (the product) is **negative**, **positive or zero**. Try to do this **WITHOUT** multiplying the 3 numbers.

Examples

Input	Output
2 3 -1	negative

Input	Output
2 3 1	positive