1. Folding a Piece of Paper

Create a function that returns the thickness (in meters) of a piece of paper after folding it n number of times. The paper starts off with a thickness of 0.5mm.

Examples

numLayers(1) ➞ "0.001m"

// Paper folded once is 1mm (equal to 0.001m)

numLayers(4) ➞ "0.008m"

// Paper folded 4 times is 8mm (equal to 0.008m)

numLayers(21) ➞ "1048.576m"

// Paper folded 21 times is 1048576mm (equal to 1048.576m)

Notes

   There are 1000mm in a single meter.

   Don't round answers.

2. Get the Area of a Country

Create a function that takes a country's name and its area as arguments and returns the area of the country's proportion of the total world's landmass.

Examples

areaOfCountry("Russia", 17098242) ➞ "Russia is 11.48% of the total world's landmass"

areaOfCountry("USA", 9372610), "USA is 6.29% of the total world's landmass"

areaOfCountry("Iran", 1648195) ➞ "Iran is 1.11% of the total world's landmass"

Notes

   The total world's landmass is 148,940,000 [Km^2]

   Round the result to two decimal places.

3. Find the Second Largest Number

Create a function that takes an array of numbers and returns the second largest number.

Examples

secondLargest([10, 40, 30, 20, 50]) ➞ 40

secondLargest([25, 143, 89, 13, 105]) ➞ 105

secondLargest([54, 23, 11, 17, 10]) ➞ 23

Notes

      There will be at least two numbers in the array.

4. Basic Calculator

Create a function that takes two numbers and a mathematical operator + - / * and will perform a calculation with the given numbers.

Examples

calculator(2, "+", 2) ➞ 4

calculator(2, "", 2) ➞ 4*

calculator(4, "/", 2) ➞ 2

Notes

> *If the input tries to divide by 0, return: "Can't divide by 0!"*

5. Move Capital Letters to the Front

Create a function that moves all capital letters to the front of a word.

Examples

capToFront("hApPy") ➞ "APhpy"

capToFront("moveMENT") ➞ "MENTmove"

capToFront("shOrtCAKE") ➞ "OCAKEshrt"

Notes

> *Keep the original relative order of the upper and lower case letters the same.*

6. Total Volume of All Boxes

Given an array of boxes, create a function that returns the total volume of all those boxes combined together. A box is represented by an array with three elements: length, width and height.

For instance, totalVolume([2, 3, 2], [6, 6, 7], [1, 2, 1]) should return 266 since (2 x 3 x 2) + (6 x 6 x 7) + (1 x 2 x 1) = 12 + 252 + 2 = 266.

Examples

totalVolume([4, 2, 4], [3, 3, 3], [1, 1, 2], [2, 1, 1]) ➞ 63

totalVolume([2, 2, 2], [2, 1, 1]) ➞ 10

totalVolume([1, 1, 1]) ➞ 1

Notes

> *You will be given at least one box.*

> *Each box will always have three dimensions included.*