More Exercise: JavaScript Syntax and Operators

Problems for exercises lab for the "JavaScript Fundamentals" course @ SoftUni.
Submit your solutions in the SoftUni judge system at
https://judge.softuni.bg/Contests/Practice/Index/1423

1. Daily Calorie Intake

Write a JS function that calculates your daily calorie intake.

All you need is a **person's sex, weight, height, age and active factor**.

First, you need to calculate the **basic metabolism** of a person. Depending on the gender of the person, use one of the two formulas given below:

Calories (man) = 66 + 13.8 * weight + 5 * height - 6.8 * age
Calories (woman) = 655 + 9.7 * weight + 1.85 * height - 4.7 * age

After that, you should calculate the weekly activity:

- if a person does not exercise during the week, the active factor (AF) is **1.2;**
- for 1 or 2 workouts per week, AF = **1.375**;
- between 3 and 5 workouts per week, AF = **1.55**;
- 6 or 7 workouts per week, AF = **1.725**;
- For workouts that are more than 7 per week, AF = **1.90**.

The multiplication of AF and the calorie consumed by basic metabolism gives you the daily calorie intake.

Print the following text on the console: `'My calorie intake is {calories}'` . Print the calories rounded to the **nearest integer**.

Input

The **input** comes as two arguments passed to your function. The first argument is an **array that contains the person data – sex, weight, height, age**. The second argument is a **number that represents the workouts** for that person.

The **output** should be printed on the console.

Example

Input	Output
`['f', 46, 157, 32], 5`	1924

Input	Output
`['m', 86, 185, 25], 3`	3112

2. Common Numbers

You will receive three integer arrays. Write a JS function to find the **common** elements from the three arrays. Save the unique numbers in a new array and calculate the **average** and the **median** of it.

Print on the console:

- `'The common elements are {array}.'` – sort the array in ascending order.
- `'Average: {number}'`
- `'Median: {number}'`

Input

The **input** comes as three integer arrays.

The **output** should be printed to the console.

Input	Output
[5, 6, 50, 10, 1, 2], [5, 4, 8, 50, 2, 10], [5, 2, 50]	The common elements are 2, 5, 50. Average: 19. Median: 5.

Input	Output
[1, 2, 3, 4, 5], [3, 2, 1, 5, 8], [2, 5, 3, 1, 16]	The common elements are 1, 2, 3, 5. Average: 2.75. Median: 2.5.

3. Humanized Number

You will receive a text as an input. The text will be a **string** and it can contain **dots, commas and blank spaces**. Write a JS function that **finds all numbers** in a text and humanizes them (Formats a number to a human – readable string), by adding a correct suffix, such as **1st, 2nd, 3rd or 4th**. Print each number on a separate line.

Input

The **input** comes as a number passed to your function.

The **output** should be printed to the console.

Input	Output
'The school has 256 students. In each class there are 26 chairs, 13 desks and 1 board.'	256th 26th 13th 1st

Input	Output
'Yesterday I bought 12 pounds of peppers, 3 kilograms of carrots and 5 kilograms of tomatoes.'	12th 3rd 5th

4. Perfect Number

Write a JS function to find the **perfect number/numbers** in an **array of numbers**. A perfect number is a **positive integer** that is **equal to the sum of its proper positive divisors**, **excluding the number itself** (also known as its aliquot sum). Equivalently, a perfect number is a number that **is half the sum of all of its positive divisors (including itself).**

Example: Perfect number is 6, because 1, 2, and 3 are its proper positive divisors, and **1 + 2 + 3 = 6**. Equivalently, the number 6 is equal to half the sum of all its positive divisors: **(1 + 2 + 3 + 6) / 2 = 6.**

Input

The **input** comes as a number array passed to your function.

The **output** should be printed to the console. Print the elements on a single line, separated by a **comma and a single space**. In case of **no perfect numbers** in the array, just print **`'No perfect number'`**.

Examples

Input	Output
[5, 6, 28]	6, 28

Input	Output
[5, 32, 82]	No perfect number

5. Converter to Coins

Write a JS function to **convert** a given number into coins. The input comes as **two arguments** passed to your function. The first argument is an **integer** number – the amount you want to convert into coins. The second argument is an integer **array** of coin values. First, you need to **order the array in descending order** because you want to start converting from the largest coins.

Example: If the amount is **57** and you have **[25, 10, 5, 1]** coins, after conversion you have to receive **two 25** cent coins, **one 5** cent coin and **two 1** cent coins.

Input

The input comes as **two arguments** passed to your function.

The **output** should be printed to the console. Print the elements on a single line, separated by a **comma and a single space**.

Example

Input	Output
`46, [10, 25, 5, 1, 2]`	`25, 10, 10, 1`

Input	Output
`123, [5, 50, 2, 1, 10]`	`50, 50, 10, 10, 2, 1`