

Functions-Exercises

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1. Smallest of Three Numbers

Write a JS function which receive **three integer** numbers to print the **smallest** of the three integer numbers. Use appropriate name for the function.

Examples

| Input | Output |
|---------------------|--------|
| 2, 5, 3 | 2 |
| 600, 342, 123 | 123 |
| 25, 21, 4 | 4 |



2. Add and Subtract

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

Examples

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

3. Characters in Range

Write a JS function that receives **two characters** and prints on a single line all the characters in between them according to the **ASCII** code.

Examples

| Input | Output |
|-------------|--|
| 'a', 'd' | b c |
| '#', ':' | \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 |
| 'C', '#' | \$ % & ' () * + , - . / 0 1 2 3 4 5 6 7 8 9 : ; < = > ? @ A B |



4. Odd and Even Sum

You will receive a **single number**.

You have to write a JS function, that returns the **sum** of **all even** and **all odds** digits from that number.

Examples

| Input | Output |
|-------------------------|-----------------------------|
| 1000435 | Odd sum = 9, Even sum = 4 |
| 3495892137259234 | Odd sum = 54, Even sum = 22 |

5. Palindrome Numbers

A palindrome is a number which reads the same **backward as forward**, such as 323 or 1001. Write a JS function which receives an **array of positive integer** and checks if each integer is a palindrome or not.

Write isPalindrome function.

| Input | Output | Input | Output |
|--------------------------|--------|------------------------|--------|
| [123,323,421,121] | false | [32,2,232,1010] | false |
| | true | | true |
| | false | | true |
| | true | | false |

6. Password Validator

Write a JS function that checks if a given password is valid. Password rules are:

- **6 – 10 characters (inclusive)**
- **Consists only of letters and digits**
- **Have at least 2 digits**

If a password is valid print "Password is valid". If it is not valid, for every unfulfilled rule print a message:

- **"Password must be between 6 and 10 characters"**
- **"Password must consist only of letters and digits"**
- **"Password must have at least 2 digits"**

Write a function for each rule.



| Input | Output |
|--------------|--|
| 'pass' | Password must be between 6 and 10 characters Password must have at least 2 digits |
| 'APass123' | Password is valid |
| 'Pa\$\$\$\$' | Password must consist only of letters and digits Password must have at least 2 digits |

7. Shortest and Longest Word

You will receive a **single string**. This string will be a sentence. Your task here is to create JS function to find:

The **longest** and the **shortest** word in that sentence. If two words have **equal length** take the first occurrence.

Examples

| Input | Output |
|--|--|
| 'Hello how are you today? I hope you are fine ' | Longest -> Hello Shortest -> I |
| 'Lorem Ipsum is dummy text of the typesetting industry.' | Longest -> typesetting Shortest -> is |

8. Perfect Number

Write a JS function that receive a **number** and return if this number is perfect or not.

A perfect number is a positive integer that is equal to the **sum of its proper positive divisors**. That is the sum of its 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) => 6 is a perfect number, because it is the sum of 1 + 2 + 3 (all of which are divided without remainder).

Examples

| Input | Output |
|-------|--------|
|-------|--------|



| | |
|---------------------|---------------------------------------|
| 6 | Perfect number! 1 + 2 + 3 |
| 28 | Perfect number! 1 + 2 + 4 + 7 + 14 |
| 12364 98 | It's not so perfect. |

9. Progress Bar

You will receive a **single number** between 0 and 100 which is divided with 10 without residue (0, 10, 20, 30...).

Your task is to create a JS function that visualize a **loading bar** depending on that number you have received in the input. See examples for more clarity.

Examples

| Input | Output |
|------------|------------------------------------|
| 30 | 30% [%%%......] Loading... |
| 50 | 50% [%%%%%%%%.] Loading... |
| 100 | [%%%%%%%%%%%%] Complete! |

10. Factorial Division

Write a JS Function that receives **two** integer numbers. Calculate [factorial](#) of each number. Divide the first result by the second and print the division formatted to the **second decimal** point.

Examples

| Input | Output | Input | Output |
|-------|--------|-------|--------|
|-------|--------|-------|--------|



| | | | |
|---|-------|---|--------|
| 5 | 60.00 | 6 | 360.00 |
| 2 | | 2 | |

Hints

Try to use [recursion](#)

