

Lab: Advanced Functions

Problems for in-class lab for the [“JavaScript Advanced” course @ SoftUni](https://judge.softuni.bg/Contests/330/). Submit your solutions in the SoftUni judge system at <https://judge.softuni.bg/Contests/330/>.

1. Aggregates

Write a JS program that uses a **reducer** function to **display** information about an **input array**.

Input

You will receive an **array** of **numeric** values.

Output

The output should be the **printed** on the console. Display the **sum** of all elements in the array, the value of the **smallest**, the value of the **biggest**, the **product** of all elements and a string of all elements **joined** together.

Examples

Sample Input	Output
[2,3,10,5]	Sum = 20 Min = 2 Max = 10 Product = 300 Join = 23105
[5, -3, 20, 7, 0.5]	Sum = 29.5 Min = -3 Max = 20 Sum = -1050 Join = 5-32070.5

2. Currency Format

Write a higher-order JS function that fixes some of the parameters of another function. Your program will receive a function that takes 4 parameters and returns a formatted string (a monetary value with currency symbol). Your task is to return another function that only takes one parameter and returns the same formatted string.

This is the function you will receive:

currencyFormatter
<pre>function currencyFormatter(separator, symbol, symbolFirst, value) { let result = Math.trunc(value) + separator; result += value.toFixed(2).substr(-2,2); if (symbolFirst) return symbol + ' ' + result; else return result + ' ' + symbol; }</pre>

Set the following parameters to fixed values:

```
separator: ","  
symbol: "$"  
symbolFirst: true
```

The final parameter **value** is the one that the returned function will receive.

Input

You will receive a **function** parameter.

Output

You need to **return a function** that takes one parameter – **value**.

Examples

Sample Input
<pre>let dollarFormatter = result(currencyFormatter); console.log(dollarFormatter(5345)); // \$ 5345,00 console.log(dollarFormatter(3.1429)); // \$ 3,14 console.log(dollarFormatter(2.709)); // \$ 2,71</pre>

3. Command Processor

Write a JS program that keeps a string **inside it's context** and can execute different **commands** that modify or output the string on the console.

append(str) – add **str** to the end of the internal string

removeStart(n) – remove the **first n** characters from the string, **n** is an integer

removeEnd(n) – remove the **last n** characters from the string, **n** is an integer

print – output the stored string to the **console**

Input

You will receive an **array of strings**. Each element is a command that may be a single word or contain an argument, separated by space.

Output

Whenever you receive the command **print**, output should be the **printed** on the console. Any other operations are carried onto the **internal** storage of the function.

Examples

Sample Input	Output
<pre>['append hello', 'append again', 'removeStart 3', 'removeEnd 4',</pre>	<pre>loa</pre>

'print']	
['append 123', 'append 45', 'removeStart 2', 'removeEnd 1', 'print']	34

4. Max Element

Write a JS program that takes an **array** of **numeric elements** as input and **returns** the **largest** element of the array.

Input

You will receive an **array** of **numbers**.

Output

The **output** should be the **return** value of your function. It represents the **largest element** of the array.

Examples

Sample Input	Output
[10, 20, 5]	20
[1, 44, 123, 33]	123

5. Next Article

Write a JS program that sequentially **displays articles** on a web page when the user **clicks** a button. You will receive an **array of strings** that will initialize the program. You need to return a function that keeps the initial array in its closure and every time it's called, it takes the first element from the array and displays it on the web page, inside a div with ID "**content**". If there are no more elements left, your function should do nothing.

HTML and JavaScript Code

You are given the following **HTML** code:

article.html
<pre><!DOCTYPE html> <html lang="en"> <head> <meta charset="UTF-8"> <title>Next Article</title> <style>div{width:600px; text-align: center; font-size: 1.5em} article{border: 2px solid blue; padding: 2em; margin: 1em}</style> <script src="https://code.jquery.com/jquery-3.1.1.min.js" integrity="sha256-hVnYaiADRT02PzUGmuLJR8BLUSjGIZsDYGmIJLv2b8=" crossorigin="anonymous"></script> <script src="next-article.js"></script> </head> <body></pre>

```

<div id="content"></div>
<div><button onclick="showNext()">Show Next Article</button></div>
<script>
  let articles =[
    "Cats are the most popular pet in the United States: There are 88 million pet cats and 74 million dogs.",
    "A group of cats is called a clowder.",
    "Cats have over 20 muscles that control their ears.",
    "A cat has been mayor of Talkeetna, Alaska, for 15 years. His name is Stubbs.",
    "The world's largest cat measured 48.5 inches long."
  ];
  let showNext = getArticleGenerator(articles);
</script>
</body>
</html>

```

It comes together with the following **JavaScript** code:

```

next-article.js

function getArticleGenerator(articles) {
  // TODO
}

```

Your function will be called automatically, there is **no need** to attach any event listeners.

Input

You will receive an **array** of strings.

Output

Return a **function** that displays the array elements on the web page.

Examples

