

Lab: Functions

Problems for exercise and homework for the ["JS Fundamentals" Course @ SoftUni](https://softuni.org/).

Submit your solutions in the SoftUni judge system at: <https://judge.softuni.org/Contests/1230/>

1. Format Grade

Write a function that **receives a grade** between **2.00** and **6.00** and **prints** a formatted line with **grade and description**.

- < 3.00 - "Fail"
- >= 3.00 and < 3.50 - "Poor"
- >= 3.50 and < 4.50 - "Good"
- >= 4.50 and < 5.50 - "Very good"
- >= 5.50 - "Excellent"

Examples

| Input | Output |
|-------|------------------|
| 3.33 | Poor (3.33) |
| 4.50 | Very good (4.50) |
| 2.99 | Fail (2) |

Hints

- Use a series of **if** statements checking the threshold between grade brackets

```
function formatGrade(grade) {  
  if (grade < 3.00) {  
    console.log('Fail (2)');  
  } else if (grade < 3.5) {  
    console.log(`Poor (${grade.toFixed(2)})`);  
  }  
  // TODO: Add other conditions  
}
```

2. Math Power

Write a function that **calculates** and **print** the value of a number **raised** to a **given power**:

Examples

| Input | Output |
|-------|--------|
| 2,8 | 256 |
| 3,4 | 81 |

Hints

- Create a function that will have **two parameters** - the **number** and the **power**.
- **Print** the result to the console.

3. Repeat String

Write a function that receives a **string** and a **repeat count n**. The function should **return** a new string (the old one repeated **n** times).

Examples

| Input | Output |
|-------------|--------------|
| "abc", 3 | abccabccabc |
| "String", 2 | StringString |

Hints

1. Use a loop or another method to repeat the input string.
2. Use the **return** operator to produce the result.

4. Orders

Write a function that calculates the **total price** of an order and prints it on the console. The function 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

- Create a function and pass the two variables in.
- Print the result in the function.

5. Simple Calculator

Write a function that receives **three parameters** – two numbers and an operator (string) – and calculates the result depending on the operator. Operator can be **'multiply', 'divide', 'add' or 'subtract'**. Try to solve this task using **arrow functions**.

Bonus

Solve this task **without** using any conditional statements (no **if** or **switch** statements or ternary operators).

Input

The input comes as parameters named **numOne**, **numTwo**, **operator**.

Examples

| Input | Output |
|--------------------------|--------|
| 5, 5, 'multiply' | 25 |
| 40, 8, 'divide' | 5 |
| 12, 19, 'add' | 31 |
| 50, 13, 'subtract' | 37 |

Hints

- Use a **switch** statement for the different operators.

6. Sign Check

Write a function, that checks whether the result of the multiplication **numOne** * **numTwo** * **numThree** is positive or negative. Try to do this **WITHOUT** multiplying the 3 numbers.

Input

The input comes as parameters named **numOne**, **numTwo**, **numThree**.

Output

- If the **result** is **positive**, print on the console -> "**Positive**"
- Otherwise, print -> "**Negative**"

Example

| Input | Output |
|-------------------|----------|
| 5, 12, -15 | Negative |
| -6, -12, 14 | Positive |

| | |
|------------------|----------|
| -1, -2, -3 | Negative |
| -5, 1, 1 | Negative |

Hints

- Consider how the sign of each of the three input parameters will affect their product.
- Check all the different combinations for the three numbers.