Functions and Statements - Lab

Problems with exercise and homework for the "JS Front-End" Course @ SoftUni.

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`	`abcabcabc`
`"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.

7. Print certificate – additional task (RS solution):

```
function printCertificate(grade, student) {

    function printCert() {
        printHeader();
        printName(student);
        printGrade(grade);
    }

    function printHeader() {
        console.log('~~~-   {@}   -~~~');
        console.log('~- Certificate -~');
        console.log('~~~-  ~---~  -~~~');
    }

    function printName(args) {
        console.log(args.join(' '));
    }

    function printGrade(num) {
        if (num >= 2.00 && num <= 2.99) {
            console.log(`Fail (2)`);
        } else if (num >= 3.00 && num <= 3.49) {
            console.log(`Poor (${num.toFixed(2)})`);
        } else if (num >= 3.50 && num <= 4.49) {
            console.log(`Good (${num.toFixed(2)})`);
        } else if (num >= 4.50 && num <= 5.49) {
            console.log(`Very good (${num.toFixed(2)})`);
        } else if (num >= 5.50 && num <= 6.00) {
            console.log(`Excellent (${num.toFixed(2)})`);
        }
    }

    if (grade >= 2.00 && grade <= 2.99) {
        console.log(`${student.join(' ')} does not qualify`);
    }else if(grade < 2.00 || grade > 6.00) {
        console.log('Grade is not valid!')
    }else{
        printCert();
    }
```

```
}

printCertificate(5.25, ['Peter', 'Carter', 'Johnson']);
```