

# JS Advanced – Final Exam

## Problem 3. Unit Testing

### Your Task

Using **Mocha** and **Chai** write **JS Unit Tests** to test a variable named **testNumbers**, which represents an object. You may use the following code as a template:

```
describe("Tests ...", function() {
  describe("TODO ...", function() {
    it("TODO ...", function() {
      // TODO: ...
    });
  });
});
// TODO: ...
});
```

The object that should have the following functionality:

- **sumNumber(num1, num2)** - A function that accepts two parameters:
  - check if parameters are numbers
  - numbers can be positive and negative
  - if parameters aren't number, function return undefined
  - the function returns the sum of the given numbers, rounded to second number after decimal point
- **numberChecker(input)** - A function that accepts a single parameter:
  - the function parses the input to number, and validates it
  - if the input is a number, the function checks if it is even. If so the function returns the string: **"The number is even!"**
  - otherwise the function returns: **"The number is odd!"**
  - If the input is not a number the function throws an error – **"The input is not a number!"**
- **averageSumArray(arr)** - A function that accept single parameter (array):
  - the function iterates through each element in the array, calculates the sum, and returns the average sum
  - The array will be always valid, there is no need to test the input arrays.

### JS Code

To ease you in the process, you are provided with an implementation which meets all of the specification requirements for the **testNumbers** object:

#### testNumbers.js

```
Const testNumbers = {
  sumNumbers: function (num1, num2) {
    let sum = 0;

    if (typeof(num1) !== 'number' || typeof(num2) !== 'number') {
      return undefined;
    } else {
```

```

        sum = (num1 + num2).toFixed(2);
        return sum
    }
},
numberChecker: function (input) {
    input = Number(input);

    if (isNaN(input)) {
        throw new Error('The input is not a number!');
    }

    if (input % 2 === 0) {
        return 'The number is even!';
    } else {
        return 'The number is odd!';
    }
},
averageSumArray: function (arr) {

    let arraySum = 0;

    for (let i = 0; i < arr.length; i++) {
        arraySum += arr[i]
    }

    return arraySum / arr.length
}
};

```

## Submission

Submit your tests inside a **describe()** statement, as shown above.