

Introduction to Web Development: JavaScript

Class 3: Exercises

1. Be able to understand and use many of the math properties and methods.
 - a. Determine the answers to the following example lines of code before actually running the code in your browser.

```
const numb1 = 20;
const numb2 = 12;
let val;

// simple math
val = numb1 + numb2; // addition
val = numb1 - numb2; // subtraction
val = numb1 * numb2; // multiplication
val = numb1 / numb2; // division
val = numb1 % numb2; // modulus
```

- b. Implement the following 10 math properties and methods. Be able to describe the purpose of each.

```
// Math Object
val = Math.PI;
val = Math.E;
val = Math.round();
val = Math.ceil();
val = Math.floor();
val = Math.sqrt();
val = Math.abs();
val = Math.pow();
val = Math.min();
val = Math.max();
```

- c. Explain why this block of code is multiplying the round() method by 10 and adding 1. What is the purpose of the floor() method.

```
val = Math.random();
val = Math.random() * 10;
val = Math.floor(Math.random() * 10 + 1);
```

2. Write some code demonstrating the following string operators, properties, and methods.

```
// Concatenation

// Append

// Escaping

// Length

// concat()

// changing the case
toLowerCase()
toUpperCase()

// strings as arrays

// indexOf()
indexOf()
lastIndexOf()

// charAt()

// slice()

// split()

// replace()

// includes()
```