

- **How do you declare a Variable?**

Variable means something that can change. Usually, it is declared by typing the variable, followed by an equal sign (=) followed by the value. An example, `x=2`
`x=variable` and `2 is the value`

- **Variable Types: Numbers, Strings, Booleans and arrays**

Numbers- can be written with or without decimals

an example `3` and `5.14`

Strings- it is a way of writing in order that the javascript understands for example `var myName = 'Sara Oyer';`

Booleans- is a data type of **yes/no, true/false** and **on/off** an example would be is `10<2` and the answer would be `no`

Arrays- a list that contains multiple values enclosed in square brackets and are separated by commas. Example `country=[Finland, France, Belgium]`

- **What is a Function?**

Functions are codes that you can reuse many times. Once you have the code you don't need to write it again. It is made in order that you don't need to repeat the code all the time.

- **List some arithmetic operators?**

+ addition, * multiplication, - subtraction and / division

- **What are assignment operators?**

`+=` addition assignment, `*=` multiplication assignment, `-=` subtraction assignment, `/=` division assignment

- **Explain what is a loop?**

loops are used if you want to run the same code over and over again but with a different value

Example:

```
for (let i = 0; i < country.length; i++) {  
  text += country[i] + "<br>";  
}
```

- **Error Types-Syntax and Logic?**

Syntax error and logic are types of errors. It shows up when you do something wrong in code.

Syntax error - spelling errors in codes that causes that the program does not run at all.

Logic errors- These are errors where the syntax is correct but the code is not what you intended/destined it to be. These are harder to fix than syntax errors.

Maths task 1, 2, 3

Is the finalResult 48? Yes, well done!

The final result is odd. Hrm.

```
let finalResult;

let evenOddResult;

// Add your code here
var num1= 10;
var num2= 2;
var num3= 12;
var num4 =16;
num5= num1+num2
num6= num4-num3
finalResult=num5*num6

// Don't edit the code below here!

section.innerHTML = ' ';
let para1 = document.createElement('p');
let finalResultCheck = finalResult === 48 ? `Yes, well done!` : `No, it is ${ finalResult }`;
para1.textContent = `Is the finalResult 48? ${ finalResultCheck }`;
```

Math 2

Your finalResult is 4633.33

finalNumber is a number type. Well done!

```
// Final result should be 10.42
// Add/update your code here

let result = 7 + 13 / 9 + 7;
let result2 = 100 / 2 * 6;
result= result * result2
finalResult= result.toFixed(2);
finalNumber=finalResult

// Don't edit the code below here!

section.innerHTML = ' ';
let para1 = document.createElement('p');
para1.textContent = `Your finalResult is ${ finalResult }`;
let para2 = document.createElement('p');
let finalNumberCheck = isNaN(finalNumber) === false ? `finalNumber is a number type. Well done!` :
`Oops! finalNumber is not a number.`;
para2.textContent = finalNumberCheck;
```

Math 3

False — of course an elephant is heavier than a mouse!

True — an ostrich is indeed taller than a duck!

False — the passwords do not match; please check them

```
// Statement 1: The elephant weights less than the mouse
let eleWeight = 1000;
let mouseWeight = 2;

// Statement 2: The Ostrich is taller than the duck
let ostrichHeight = 2;
let duckHeight = 0.3;

// Statement 3: The two passwords match
let pwd1 = 'stromboli';
let pwd2 = 'stRomBoli'

// Add your code here

var weightComparison = eleWeight < mouseWeight;
var heightComparison = ostrichHeight > duckHeight;
var pwdMatch = pwd1 === pwd2;

// Don't edit the code below here!
```