JavaScript math task and notes

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.

var = myName
var = myAge
var x = 23

Variable Types: Numbers, Strings, Booleans and arrays
Numbers: Can be written with or without decimals (e.x 789 and 64.34)

Strings: It is a way of writing in order that the javascript understands (var myName = 'Tony';)

Booleans: Is a data type of yes/no and true/false and on/off (e.x 54<32 and answer: No)

Arrays: A list that contains multiple values enclosed in square brackets and are separated by commas (e.x food = [rice, sushi, bread])

What is a Function?
Functions are a block of codes that are meant to perform a particular task. 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 -
Division /
Exponentiation **
Increment ++

What are assignment operators?
=
+=
-=
*=
/=

Explain what is a loop?
Help coders to save time when a certain code is needed more than once.

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

Error Types-Syntax and Logic?

Error 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.

Math task

1.

> Is the finalResult 48? Yes, well done!
>
> The final result is odd. Hrm.

```
let finalResult;

let evenOddResult;

// Add your code here

var num1 = 4;
var num2 = 8;
var num3 = 8;
var num4 = 12;
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 }`;
```

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!' : `Ooops! finalNumber is not a number.`;
para2.textContent = finalNumberCheck;

section.appendChild(para1);
```

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

```javascript
// 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!
```