

Section C. Variables



Variables are a way of storing information. The variables x and y are often used in algebra, assigning a value to each e.g. $x = 2$ and $y = 4$. We can also use variables in JavaScript, but you must declare them first using the term 'var'. Declaring a variable is a way of saying "a variable exists and this is its name" e.g.

```
var valueX = 2
var valueY = 4
var valueZ
```

valueX is the name of a variable. It has been given the value 2.
valueY is the name of a variable. It has been given the value 4.
valueZ is the name of a variable. It has not yet been given a value.

You can then use these variables in calculations.

Task 1

Using the fact that $valueX = 2$ and $valueY = 4$, write down the value of the variable 'valueZ' in each case below:

- $valueZ = valueX + 3$
- $valueZ = valueX * 2$ (* is the symbol used for multiply)
- $valueZ = valueX / 2$ (* is the symbol used for divide)
- $valueZ = valueX + valueY$
- $valueZ = (valueX - valueY) * 7$

Some rules concerning variables

- Variables should be declared before use, using the term 'var'
- Variables must start with a letter or an underscore (e.g. `FirstName` rather than `1stName`)
- Variables can only contain letters, numbers and the underscore (e.g. `Address_1`).
- Variables are case sensitive (`valueZ` is not the same as `valuez`)
- Life will be easier if you choose names that mean something (e.g. `'PeopleCount'` rather than `'x7'`)

Task 2

Add the following code to a new page and look at it in 'Preview' (remember that the JavaScript is placed between the `</title>` and `</head>` tags).

```
<script LANGUAGE="JavaScript">
<!--
var valueX = 2;
var valueY = 4;
var valueZ = valueX + valueY;
alert(valueZ);
//-->
</script>
```

A semi-colon (;) is used at the end of each statement

Task 3

Adjust the script so that it calculates and displays each of the following sums (there are many ways of achieving the correct results). Write down the answers.

- $2345 + 432$ _____
- $25 * 378$ _____
- $3578 / 72$ _____
- $(34 * 23) + 97$ _____