



# **HIGHER - ORDER FUNCTIONS**


IN JAVASCRIPT

Functions that can  
take **function as an  
argument or return a  
function as a value** is  
called a Higher order  
function.

Taking a function as an argument or returning a function as value is possible because JavaScript consider function as a **first class citizen**.

You can read more about first class citizen using link in comment...

Let's see example of passing  
function as an argument..



```
function mathOperation (operation, initial, numbers) {
  let total = initial;

  for (const number of numbers) {
    total = operation(total, number);
  }

  console.log(total);
}

function sum(n1, n2) {
  return n1 + n2;
}
function multiply(n1, n2) {
  return n1 * n2;
}

mathOperation(sum, 0, [3, 2]); // => 5
mathOperation(multiply, 1, [3, 2]); // => 6
```

# Purpose of passing function as an argument?

In the example you can see we have used different method - sum, multiply etc. and with use of one function only, so we can reuse that code again for better for maintainability and readability.

# Some Already provided Higher order functions

- `setTimeout()`
- `forEach()`
- `map()`
- `filter()`
- `reduce()`