

# JS Basics III

## Built-in Object

### Math Object



- .PI
- .SQRT2
- .round(x)
- .max()
- .min()
- .pow()
- .random()
- .trunc()

### String Object



- .length
- .slice()
- .charAt()
- .toUpperCase()
- .toLowerCase()
- ~~.lastName[ ]~~
- .trim()
- .replace()

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## Array

### Adding new element

```
let arr = [1, 2, 4, 5]
```

### Insertion

at <sup>end</sup> ~~start~~ → .push  
at middle → .splice  
at ~~end~~ <sup>start</sup> → .unshift

### Removing element

end → .pop()  
beginning → .shift()  
middle → .splice()

### Emptying an array

```
numbers = [ ];  
numbers.length = 0; // good practice  
numbers.splice()  
while (arr.length > 0)  
  arr.pop()
```

### Searching

indexOf() → searches an array for an element and returns its position.

includes → checks if an array contains the specified element

# ★ Combining and Slicing an Arrays

## Combining

let combine = arr1.concat(arr2);  
or

let combine = [...first, ...second]

## Slicing

.slice(starting index, Ending index)

## Traversing an Array

① for (let value of arr1) {  
    console.log(value);  
}

② arr.forEach (number =>  
    console.log (number));

## Joining Array

const joined = numbers.join(',');

## Splitting an Array

let parts = message.split(' ');  
here space is delimiter delim

## Sorting an Array

let arr = [1, 27, 47, 100]

arr.sort(function(a,b) {return a-b});  
console.log(arr)

The find method looks for a single (first) element that makes the function return true.

If there may be many we can use arr.filter(fn)

## Filtering an Array

numbers.filter (value => value > 0)

## Mapping an Array

numbers.map (value => 'student no' + value);

map(func) - creates a new array from results of calling function for every element

## Mapping an ~~Array~~ Object

arr.map (num => {value: num})