Challenge 4

1)
```javascript
var numbers = [10, 25, 36, 48, 59, 72, 83, 94, 107, 120];

var sum = numbers.reduce(function(acc, value) {

return acc + value;

}, 0);

console.log("value of sum: "+sum);
```

2)
```javascript
var numbers = [10, 25, 36, 48, 59, 72, 83,720, 94, 107, 120];

var b = numbers[0];

for(let i =0;i<numbers.length;i++){

    if(b<numbers[i]){

        b= numbers[i];

    }

}

console.log("largest number in array: "+b);
```

3)
```javascript
var array = ["apple", "banana", "cherry", "date","dog","cat","wood"];

var reverse = [];

for (let i = array.length - 1, j = 0; i >= 0; i--, j++) {

reverse[j] = array[i];

}

console.log(reverse);
```

4)
```javascript
var numbers = [10, 25, 36, 48, 59, 72, 83, 94, 107, 120];

var sum = numbers.reduce(function(acc, value) {

return acc + value;
```

```
}, 0);

console.log("value of average: "+sum/numbers.length);




5)var numbers = [10, 25, 36, 48, 59, 72, 83, 94, 107, 120];

var oddNumbers = numbers.filter(function(value) {

return value % 2 !== 0;

});

console.log("odd numbers in the array: "+oddNumbers);


6)function sortArray(a) {

var n = a.length;

for (var i = 0; i < n - 1; i++) {

for (var j = 0; j < n - i - 1; j++) {

if (a[j] > a[j + 1]) {

var temp = a[j];

a[j] = a[j + 1];

a[j + 1] = temp;

}

}

}

return a;

}

var array = ["apple", "date", "cherry","banana","goat","zebra","hyna"];

var sortedArray = sortArray(array);

console.log(sortedArray);
```

```javascript
7)var numbers = [10, 25, 36, 48, 59, 72, 83, 94, 107, 120];

var multiplies = numbers.map(function(value) {

return value * 2;

});

console.log("values multiplied by 2: "+multiplies);


8)var numbers = [10, 25, 36, 48, 59, 72, 83, 94, 107, 120];

var reverse = [];

for (let i = numbers.length - 1, j = 0; i >= 0; i--, j++) {

reverse[j] = numbers[i];

}

console.log(reverse);


9)function total(a) {

var total = 0;

for (var i = 0; i < a.length; i++) {

total += a[i].length;

}

return total;

}

var array = ["apple", "date", "cherry","banana","goat","zebra","hyna"];

var characters = total(array);

console.log("Total characters:", characters);


10)function greater10(a) {

var b = [];

var j=0;
```

```
for (var i = 0; i < a.length; i++) {

if(a[i]>10){

b[j] = a[i];

j++;

}

}

return b;

}

var numbers = [12, 45, 7, 21, 9, 33, 56, 4, 18, 63];

var max = greater10(numbers);

console.log(max);
```