Problems on array: January 28 2020

Q1. Write a JavaScript function to remove. 'null', '0', '"', 'false', 'undefined' and 'NaN' values from an array.
   Sample array : [NaN, 0, 15, false, -22, '', undefined, 47, null]

Solution :

```
var array = [NaN, 0, 15, false, -22, "", undefined, 47, null];
a = array.filter(Boolean);
console.log(a);
```

Q2. Write a JavaScript program to flatten a nested(any depth) array into single level.
   Sample array : a) [1, [2], [3, [[4]]], [5, 6]]
   Expected output: [1, 2, 3, 4, 5, 6]
Solution :

```
var  a =  [1, [2], [3, [[4]]], [5, 6]] ;
a = a.flat(Infinity);
```

Q4. There are two arrays with individual values, write a JavaScript program to get the difference values between these two arrays.
   Sample array : a) var array1 = [1, 2, 3] , var array2 = [100, 2, 1, 10]
   Expected output : ["3", "10", "100"]
Solution :
Option 1 :
```
var array1 = [1, 2, 3];
var array2 = [100, 2, 1, 10];

var finalArray = array1 .filter(x => !array2.includes(x)).concat(array2.filter(x =>
!array1.includes(x))).sort((a, b) => a - b);
 console.log(finalArray);
```

Option 2 :
```
var array1 = [1, 2, 3];
var array2 = [100, 2, 1, 10];
var inner = [], outer = [];
var outArr1 = array1.filter(x => !array2.includes(x));
var outArr2 = array2.filter(x => !array1.includes(x));
var finalArray = outArr1.concat(outArr2).sort((a, b) => a - b);
console.log(finalArray);
```

```
var array1 = [1, 2, 3,null];
var array2 = [100, 2, 1, 10,null];
var temp = [];
    array1.forEach(x => {!array2.includes(x)? temp.push(x):null});
    array2.forEach(x => {!array1.includes(x)? temp.push(x):null});

console.log(temp);
```

Option 3 for Q4 :
```
 var array1 = [1, 2, 3];
var array2 = [100, 2, 1, 10];

array1 = array1.toString().split(',').sort((a,b)=>a-b);
array2 = array2.toString().split(',').sort((a,b)=>a-b);

var temp = [];

array1.forEach((el) => {if(array2.indexOf(el) === -1 ) temp.push(el)});
array2.forEach((el) => {if(array1.indexOf(el) === -1 ) temp.push(el)});

array1=array1.map(Number);
console.log( array1 );
array2=array2.map(Number);
console.log( array2 );

temp=temp.map(Number);
console.log(" Difference of arrays  is :",temp);
```

Q3.There are two arrays with individual values, write a JavaScript program to compute the sum of respective
  index value from the given arrays.
  Sample array :
   a) array1 = [1, 0, 2, 3, 4]; array2 = [3, 5, 6, 7, 8, 13];
  Expected Output : [4, 5, 8, 10, 12, 13]
Solution :
```
  var array1 = [1, 0, 2, 3, 4];
  var array2 = [3, 5, 6, 7, 8, 13];
 var temp = [];
 array2.map( ( el ,  i ) => { if ( typeof array1[ i ] === "undefined" ) return temp.push( el ) ;  else  { return temp.push( el  + array1[ i ] ) ; } } ) ;
```

```
  console.log( temp ) ;
```

b)   array1 = [4, [31], [21, 32, 45], [3], 4, 78, 89];
          array2 = [6, 19, 50, 12, 34, 56, 78, 90];

Solution :
```
   var array1 = [4, [31], [21, 32, 45], [3], 4, 78, 89];
   var array2 = [6, 19, 50, 12, 34, 56, 78, 90];
   var temp = [];
   array1.flat().map((el, i) => {if (typeof array2[i] === "undefined")return temp.push(el);  else {return
temp.push(el + array2[i]);}});
   console.log(temp);
```

Solution for Q 3

a)
```
   var array1 = [1, 0, 2, 3, 4];
   var array2 = [3, 5, 6, 7, 8, 13];
   var temp = [];

 array2.map( ( el ,  i ) => { if ( i >=  array1.length ) return temp.push( el ) ;  else { return  temp.push( el  +
array1[ i ] ) ; } } ) ;
 console.log( temp ) ;
```

b)
```
   var array1 = [4, [31], [21, 32, 45], [3], 4, 78, 89];
    array1=array1.flat();
   var array2 = [6, 19, 50, 12, 34, 56, 78, 90];
   var temp = [];
 array1.map((el, i) => {if ( i >= array2.length )return temp.push(el);  else {return temp.push(el +
array2[i]);}});
   console.log(temp);

  var array1 = [4, [31], [21, 32, 45], [3], 4, 78, 89];
    array1=array1.flat();
   var array2 = [6, 19, 50, 12, 34, 56, 78, 90];
```

Common solution   for arrays level 1 :
var array1 = [1, 0, 2, 3, 4];
var array2 = [3, 5, 6, 7, 8, 13];

if (array1.length > array2.length) {

 var temp = [];
console.log("Option 1 ");

```javascript
 array1.map((el, i) => {if ( i >= array2.length )return temp.push(el);  else {return temp.push(el +
array2[i]);}});
   console.log(temp);

} else {
 var temp = [];
console.log("Option 2 ");
 array2.map((el, i) => {if ( i >= array1.length )return temp.push(el);  else {return temp.push(el +
array1[i]);}});
   console.log(temp);
}
```

Last Solution

```javascript
var array1 = [1, 0, 2, 3, 4];
var array2 = [3, 5, 6, 7, 8, 13];

var bigArray = array1.length > array2.length ?  Array.from(Array(array1.length).keys()) :
Array.from(Array(array2.length).keys());
var temp=[];
//console.log('bigArray : ',JSON.stringify(bigArray))
bigArray.forEach((ele, index) => {
   console.log('ele,index : ',ele,index)
   if (array1[index] != undefined && array2[index] != undefined) {
      temp.push((array1[index] + array2[index]));
      return false;
   }
   if (array1[index] != undefined) {
      temp.push(array1[index]);
      return false
   }
   else {
      temp.push(array2[index])
   }
}
);


console.log(temp);
```