function mergeSort (arr) {

if (arr.length < 2) return arr;

var middleIndex = Math.floor(arr.length / 2);

var firstHalf = arr.slice(0, middleIndex);

var secondHalf = arr.slice(middleIndex);

return merge(mergeSort(firstHalf), mergeSort(secondHalf));

}

function merge (array1, array2) {

var result = [];

while (array1.length && array2.length) {

var minElem;

if (array1[0] < array2[0]) minElem = array1.shift();

else minElem = array2.shift();

result.push(minElem);

}

if (array1.length) result = result.concat(array1);

else result =result.concat(array2);

return result;

}

mergeSort([6000, 34, 203, 3, 746, 200, 984, 198, 764, 1, 9, 1]);