

Q9. What will the code below output to the console and why?

```
var arr1 = "john".split("");
var arr2 = arr1.reverse();
var arr3 = "jones".split("");
arr2.push(arr3);
console.log("array 1: length=" + arr1.length + " last=" + arr1.slice(-1));
console.log("array 2: length=" + arr2.length + " last=" + arr2.slice(-1));
```

A. The output of the code is:

array 1: length=5 last=j,o,n,e,s

array 2: length=5 last=j,o,n,e,s

Explanation:

`var arr1 = "john".split("");`: This line creates an array `arr1` containing individual characters of the string "john" using the `split("")` method. So, `arr1` becomes `['j', 'o', 'h', 'n']`.

`var arr2 = arr1.reverse();`: This line creates a new array `arr2` that references the same array as `arr1`. The `reverse()` method is called on `arr1`, which reverses the order of its elements. Both `arr1` and `arr2` now point to the same reversed array `['n', 'h', 'o', 'j']`.

`var arr3 = "jones".split("");`: This line creates an array `arr3` containing individual characters of the string "jones" using the `split("")` method. So, `arr3` becomes `['j', 'o', 'n', 'e', 's']`.

`arr2.push(arr3);`: This line pushes the entire array `arr3` as a single element to the end of `arr2`. Now `arr2` becomes `['n', 'h', 'o', 'j', ['j', 'o', 'n', 'e', 's']]`.

`console.log("array 1: length=" + arr1.length + " last=" + arr1.slice(-1));`: This line logs the length of `arr1`, which is 5, and the last element of `arr1`, which is 's'. The `slice(-1)` method returns the last element of the array, which is 's'.

```
console.log("array 2: length=" + arr2.length + " last=" + arr2.slice(-1));:
```

This line logs the length of arr2, which is also 5, and the last element of arr2, which is the entire nested array ['j', 'o', 'n', 'e', 's']. The slice(-1) method returns the last element of the array, which is the last array itself.