

Practice Exercise

Review Questions

1. In JavaScript, array is an object that represents a collection of similar types of elements.(True / False)_____.
2. The 3 ways to construct array in JavaScript are_____.
3. What property tells you the length of a JavaScript array?_____.
4. If the array “foo” has a length of 10, what is the index of the first element in the array?_____.
5. If the array “foo” has a length of 10, what is the index of the last element in the array?_____.
6. What is the syntax you would use to assign the first element in the array “foo” to the variable “bar”?_____.
7. Given the following line of code, what is the length of the array “foo”?_____.

```
1 var foo = [];
```
8. Given the following line of code, what would be the output?_____.

```
1 var foo = new Array(3);  
2 document.write(foo);
```
9. What is this?_____.

```
1 var myArray = [[[]]];
```
10. If an array with name as “names” contain three elements then how you will print the third element of this array?_____.
11. The JavaScript statement `a = new Array(2, 4)` defines_____.
12. What would be the output for the following code?_____.

```
1 var my_array = [1, 'bob'];  
2 document.write(my_array[1]);
```

13. What would be the output for the following code?_____.
- ```
1 ['uno', 'dos', 'tres'].length;
```
14. Print the last element of my\_array on the web page.\_\_\_\_\_.
- ```
1 var my_array = [ 'horse', 'pig', 'cow' ];
```
15. What would be the output for the following code?_____.
- ```
1 var writing_tools = ['pencil', 'pen', 'marker'];
2 document.write(writing_tools[writing_tools.length - 1]);
```
16. What does the following statement return?\_\_\_\_\_.
- ```
1 typeof( [ 'cats' ] );
```
17. Update the “shots” element in the following array to be “don’t do it”._____.
- ```
1 var beverages = ['beer', 'wine', 'shots'];
```
18. Create an array with the following elements:  
"bob", 23, false  
\_\_\_\_\_.
19. What would be the output for the following code?\_\_\_\_\_.
- ```
1 var q = 'quack';
2 var num = 555666;
3 document.write( [ num, q, true ] );
```
20. After executing the JavaScript statement `a = (new Array(10)).toString()`, what’s the value of a?_____.
21. Which browser supports the `sort()` method for arrays?_____.

Exercises

- Write the expected output, or compiler errors if any, for each of the following programs in the box provided below each program.
- Then execute the programs and check your answers.
- Then answer the questions given below.

program 1

```
1 var numbers = [2, 4, 6, 8];
2 var counter = 0;
3 var sum = 0;
4 while (counter < numbers.length) {
5     sum += numbers[counter];
6     counter++;
7 }
8 document.write(sum);
```

Q1: What will be the output for the above code snippet?

Program 2

```
1 var words = ['teenage', 'mutant', 'ninja', 'turtles'];
2 var great_show = '';
3 for (var i = 0; i < words.length; i++) {
4     great_show += words[i] + ' ';
5 }
6 document.write(great_show);
7 }
```

Q1: What will be the output for the above code snippet?

Program 3

```
1 var a1 = [, ,];
2 var a2 = new Array(3);
3 0 in a1
4 0 in a2
```

Q1: What will be the result for the above code snippet?

Program 4

```

1 <script type = ‘‘text/javascript’’ language = ‘‘javascript’’>
2     var tsw = new Array();
3     tsw[0] = ‘‘WebDevelopment’’;
4     tsw[1] = ‘‘ApplicationDevelopment’’
5     tsw[2] = ‘‘Testing’’
6     tsw[3] = ‘‘Web technologies’’;
7     document.write(tsw[0, 1, 2, 3]);
8 </script>

```

Q1: What will be the output for the above code snippet?

Program 5

```

1 while (a != 0) {
2     a = new Array();
3     b = new Array();
4     a[1] = 3;
5     b[2] = 5;
6     a = b;
7 }

```

Q1: Which values are contained in a[1] and a[2] after this code executes?

Program 6

```

1 a = new Array(1, 2, 3);
2 for (i in a)
3     alert(‘‘a[i] = ’’ + a[i]);

```

Q1: How many times will the alert box appear?

Program 7

```
1 a = new Array();
2 a[0] = 12;
3 a[1] = false;
4 a[2] = 'text';
5 a[3] = a;
```

Q1: Which line in this code will cause an error?

Additional Exercises

1. Sum all the elements in the following array if they are numbers, otherwise ignore the element. Print the result to the web page.

```
var weird = [1, 40, "bob", [], false, 89];
```

2. Concatenate all the elements in the following array that begin with the letter “b” and print the resulting sentence to the web page.

```
var heaven = [34, [], "bodacious", "barbecues", "begin", "whatever",  
"by", "battering", true, "bacon"];
```

3. Build a mock Username registration program with the following requirements:

- The user can enter a Username in the inputbox, and click a button to register;
- If the Username already exists, the program informs the user;
- If the Username is not already stored in the program, the new Username is added, the user is informed, and all stored Usernames are displayed on the page in alphabetical order.

4. Write a program to sort array elements using JavaScript.