

1) Initialize names to an empty array.

```
let names = _____
```

2) How many elements does names have?

```
let names = [];  
names[0] = "Sue";  
names[1] = "Bob";  
names[2] = "Jeff";
```

3) What is output to the console?

```
let names = [];  
names[0] = "Sue";  
names[1] = "Bob";  
names[2] = "Jeff";  
console.log(names[0] + names[1]);
```

4) What is the largest number nameIndex can be to output a name?

```
let names = ["Maria", "Braden", "Jaden", "Aditya"];  
console.log(names[nameIndex]);
```

5) What is output to the console?

```
let nums = [5, 2, 9, 3];  
nums[0] = nums[1] + nums[2];  
console.log(nums[0]);
```

6) Write the simplest code in the blank space to output all elements in pets.

```
let pets = ["cats", "dogs", "fish"];  
console.log( _____ );
```

Answers :

1. []

2. 3

3. SueBob

names[0] and names[1] are concatenated, so "Sue" + "Bob" = "SueBob".

4. 3

The array holds four elements, so the last element is index 3. Using an index > 3 results in "undefined" being output because array elements that are not assigned a value are undefined.

5. 11

nums[0] = nums[1] + nums[2] = 2 + 9 = 11.

6. pets

Specifying the array's name with no brackets outputs all elements separated by commas.

### Adding and removing array elements.

The six individuals in the `line` array are waiting in line. Write the JavaScript code to add or remove elements to/from the array to simulate the following events:

1. The person at the front of the line (index 0) leaves the line (`shift`).
2. The person at the end of the line cuts in front of the person at the front of the line (`pop` and `unshift`).
3. Two new people named "Poe" and "Snoke" cut into line behind the second person in line (`splice`).
4. The fifth person in line leaves the line (`splice`).
5. A new person named "Han" enters the back of the line (`push`).

Finally, display the contents of the `line` array to view the new line occupants. A correct solution will show: Leia, Finn, Poe, Snoke, Maz, Han.

// People waiting in line (Kylo is in front, Leia at the end)

```
let line = ["Kylo", "Finn", "Rey", "Maz", "Leia"];
```

// Show entire line

console.log(line);

Answer :

Code :

```
// People waiting in line (Kylo is in front, Leia at the end)
let line = ["Kylo", "Finn", "Rey", "Maz", "Leia"];

// Show entire line
console.log(line);

//Do the steps given

line.shift();

let x = line.pop();
line.unshift(x);

line.splice(2, 0, "Poe", "Snoke");

line.splice(4, 1, null);

line.push("Han");

//Output new line
console.log(line);
```