

1) Which of the following is the correct way to create an array of 20 integer values?

- a) `int[] array = new int[20];`
- b) `int[20] array = new int[];`
- c) `int[20] array = new int[20];`
- d) `int[] array = new int[];`
- e) `int[] array = new int(20);`

2) Which of these is the correct way to store the value 3 at the beginning of an array called **nums**?

- a) `nums[3] = 0;`
- b) `nums[0] = 3;`
- c) `nums[0, 3];`
- d) `nums[1] = 3;`
- e) `nums[3] = 1;`

3) Which of these lines of code will calculate the last valid index in the array called **values**?

- a) `int last = values.length;`
- b) `int last = values.length + 1;`
- c) `int last = values.length - 1;`
- d) `int last = values.length();`
- e) `int last = values.length() + 1;`

4) Given the following array declaration, draw a memory diagram for the array:

```
int[] array = new int[]{1, 5, 7, 8};
```

5) Using the array from problem 4, draw the state of the array after the following commands (they are cumulative)

```
array[1] = 3;
```

```
array[array.length-1] = 4;
```

```
array[array[0]] = array[2];
```

```
array[3]--;
```

6) What does the following code do for the array {9, 2, 5, -1}?

```
int value = 0;
for(int i = 0; i < array.length; i++)
    value += array[i];
System.out.println(value);
```

7) What does the following code do for the array {9, 2, 5, -1}?

```
int value = 0;
for(int i = 0; i < array.length; i++)
    value += i;
System.out.println(value);
```

8) What does the following code do to the array {1, 3, 0, 2, 4}?

```
for(int i = 0; i < array.length; i++)
{
    array[array[i]] = array[i];
}
```

9) You'd like to print out all the values in an array called **scores**.... but the following line of code only generates the following output:

Code:

```
System.out.println(scores);
```

Output:

```
Array@FD123E
```

(This is a real problem with arrays - you can't print out the values in an array by using one printout statement). Write a couple lines of code that would print out all the values of **scores**.

10) Which of the following lines of code will generate an error for an array of ints called **test** with length 6?

```
array[5] = 3;
array[6] = 3;
array[0] = 3;
array[-1] = 3;
array[array.length] = array.length - 1;
array[array.length - 1] = array.length;
array[0.0] = 3;
array[0] = 3.0;
```