Practice questions v3: Array

1. Define a two-dimensional array named **settings** large enough to hold the table of data below. Initialize the array with the values in the table.

12	24	32	21	42
14	67	87	65	90
19	1	24	12	8

2. Fill in the table below so it shows the contents of the following array:
int table[3][4] = {{2, 3}, {7, 9, 2}, {1}};

3. A video rental store keeps DVDs on 50 racks with 10 shelves each. Define a two-dimensional array large enough to represent the store's storage system.

4. Assuming that array1 and array2 are both arrays, why is it not possible to assign the contents of array2 to array1 with the following statement?
array1 = array2;

5. The arrays numberArray1 and numberArray2 have 100 elements. Write code that copies the values in numberArray1 to numberArray2

6. Define a two-dimensional array of integers named grades. It should have 30 rows and 10 columns.

7. Write a program that lets the user enter 10 values into an array. The program should then display the largest and smallest values stored in the array.

8. Write a program that lets the user enter the total rainfall for each of 12 months into an array of doubles. The program should calculate and display the total rainfall for the year, the average monthly rainfall, and the months with the highest and lowest amounts. *Input*

Validation: Do not accept negative numbers for monthly rainfall figures.

9. Identify any errors in the following array declaration.
int x[4] = { 8, 7, 6, 4, 3 };

10. What is the output of the following code?
```
double a[3] = {1.1, 2.2, 3.3};
cout << a[0] << " " << a[1] << " " << a[2] << endl;
a[1] = a[2];
cout << a[0] << " " << a[1] << " " << a[2] << endl;
```

11. What is the output of the following code?

```
int i, temp[10];
```

```
for (i = 0; i < 10; i++)
temp[i] = 2 * i;
for (i = 0; i < 10; i++)
cout << temp[i] << " ";
cout << endl;
for (i = 0; i < 10; i = i + 2)
cout << temp[i] << " ";
```

12. What is wrong with the following piece of code?

```
int sample_array[10];
for (int index = 1; index <= 10; index++)
    sample_array[index] = 3 * index;
```

13. Write a program that takes as input an array of integers and checks if the array starts or ends with the digit 2.
14. Write a program that prints the following board (game position numbers) of tic-tac-toe.

    1 2 3
    4 5 6
    7 8 9
15. The program should ask for moves alternately from player X and player O. The players enter their moves by entering the position number they wish to mark. After each move, the program displays the changed board. A sample board configuration is as follows:

    X 2 O
    4 5 6
    7 8 9

    Note: You only need to run the turn of two players one time each.