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- (5 points) True or False? In C++, the index type of a one-dimensional array can be any integral or enumeration type and the index of an array starts from zero.
 - True
 - False
- (5 points) True or False? An individual array element can be passed as an argument to a function. (For example: `printFunc(a[4])` is a function call by passing an array element)
 - True
 - False
- (5 points) True or False? The elements of an array are all of the same data type.
 - True
 - False
- (5 points) True or False? Given the declaration

```
int beta[20];
```

the expression `beta[3]` accesses the fourth element of the array.
 - True
 - False
- (5 points) True or False? If a program has the declarations

```
enum WeatherType {SUNNY, CLOUDY, FOGGY, WINDY};  
int frequency[4];
```

then the statement

```
cout << frequency[CLOUDY];
```

is syntactically valid.
 - True
 - False
- (5 points) True or False? The function heading

```
void SomeFunc( float x[] )
```

causes a compile-time error because the size of the array is missing.
 - True
 - False

7. (5 points) True or False? The array declared as
`float angle[10][25];`
has 10 rows and 25 columns.
- A. True
 - B. False
8. (5 points) True or False? The array declared as
`int bowlingScore[6][12];`
contains 72 int components.
- A. True
 - B. False
9. (5 points) True or False? If a program contains the declaration
`int salePrice[100][100];`
then the statement
- ```
for (int i = 0; i < 100; i++)
 cout << salePrice[3][i];
```
- outputs all the values in the fourth of the array.
- A. True
  - B. False
10. (5 points) True or False? When passing an array to a function just by the array name as argument, we actually pass the memory location of the first element (sometimes called base address) of the array to the function, which is equivalent to passing-by-reference.
- A. True
  - B. False
11. (5 points) Which of the following statements about passing C++ arrays as arguments is false?
- A. It is impossible to pass the entire array by value.
  - B. When declaring an array in a function's parameter list, you do not attach an ampersand (&) to the name of the element type.
  - C. When declaring a one-dimensional array in a function's parameter list, you must include its size within square brackets.
  - D. At run time, the base address of the argument is passed to the function.
12. (5 points) Given the declarations
- ```
float x[300];  
float y[75][4];  
float z[79];
```
- which of the following statements is true?

- A. x has more components than y.
 - B. y has more components than x.
 - C. y and z have the same number of components.
 - D. x and y have the same number of components.
 - E. a and c above
13. (5 points) Given the declaration
- ```
char table[7][9];
```
- which of the following stores the character 'B' into the fifth row and second column of the array?
- A. `table[4][1] = 'B';`
  - B. `table[1][4] = 'B';`
  - C. `table[5][2] = 'B';`
  - D. `table[2][5] = 'B';`
  - E. `table[5] = 'B';`
14. (5 points) The following code fragment invokes a function named `InitToZero`:
- ```
int alpha[10][20];
InitToZero(alpha);
```
- Which of the following is a valid function heading for `InitToZero`?
- A. `void InitToZero(int beta[] [])`
 - B. `void InitToZero(int beta[10][20])`
 - C. `void InitToZero(int beta[10] [])`
 - D. `void InitToZero(int beta[] [20])`
 - E. b and d above
15. (5 points) Which of the following cannot be used to input values into a 3-element int array named `alpha`?
- A. `cin >> alpha[0] >> alpha[1] >> alpha[2];`
 - B. `cin >> alpha;`
 - C. `for (i = 0; i < 3; i++)`
`cin >> alpha[i];`
 - D. `cin >> alpha[0];`
`cin >> alpha[1];`
`cin >> alpha[2];`
16. (5 points) What does the following function do? (All variables are of type `int`.) Why do we declare variables `position1` and `position2` as passing-by-reference?

```

void mystery(int arr[][50], int & position1, int & position2, int searchValue)
{
    position1 = -1;
    position2 = -1;

    for (int j = 0; j < 50; j++)
        for (int i = 0; i < 50; i++)
            if (arr[i][j] == searchValue)
                {
                    position1 = i;
                    position2 = j;
                }
}

```

17. (5 points) After execution of the program fragment

```

int arr[3][3];
int i, j;

for (i = 0; i < 3; i++)
    for (j = 0; j < 3; j++)
        arr[i][j] = i + j;

```

what are the contents of the array?

18. (5 points) Given the declarations

```

float alpha[5][50];
float sum = 0.0;

```

write a code fragment that computes the sum of the elements in row 2 of alpha.

19. (5 points) What is the output of the following program fragment?

```

int alpha[5] = {100, 200, 300, 400, 500};
int i;

for (i = 4; i >= 0; i--)
    cout << alpha[i] << ' ';

```

20. (5 points) After execution of the code fragment

```
int arr[5];
int i;

for (i = 0; i < 5; i++)
{
    arr[i] = i + 2;
    if (i >= 3)
        arr[i-1] = arr[i] + 3;
}
```

what is contained in arr[3] ?

21. (10 points (bonus)) Write a function to reverse an array.