



LAB 4

1. What is the output of the following program segment:

```
int temp[5];
for (int i = 0; i < 5; i++)
    temp[i] = 2 * i - 3;
for (int i = 0; i < 5; i++)
    cout << temp[i] << " ";
cout << endl;
temp[0] = temp[4];
temp[4] = temp[1];
temp[2] = temp[3] + temp[0];
for (int i = 0; i < 5; i++)
    cout << temp[i] << " ";
cout << endl;
```

2. Suppose list is an array of six components of type int . What is stored in list after the following C++ code executes?

```
list[0] = 5;
for (int i = 1; i < 6; i++){
    list[i] = i * i + 5;
    if (i > 2)
        list[i] = 2 * list[i] - list[i - 1];
}
```

3. Determine whether the following array declarations are valid.

- a. `int a[4] = {0, 4, 3, 2, 7};`
- b. `int b[10] = {0, 7, 3, 12};`
- c. `int c[7] = {12, 13, , 14, 16, , 8};`
- d. `double lengths[] = {12.7, 13.9, 18.75, 20.78};`
- e. `char name[8] = "Samantha";`

4. Consider the following function heading:

```
void tryMe(int x[], int size);
```

and the declarations:

```
int list[100];
int score[50];
double gpa[50];
```

Which of the following function calls is valid?

- a. `tryMe(list, 100);`
- d. `tryMe(gpa, 50);`
- e. `tryMe(score, 49);`

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5. Suppose that you have the following function definition:

```
void sum(int x, int y, int& z){  
    z = x + y;  
}
```

Consider the following declarations:

```
int list1[10], list2[10], list3[10];  
int a, b, c;
```

Which of the following function calls is valid?

- a. `sum(a, b, c);`
- b. `sum(list1[0], list2[0], a);`
- c. `sum(list1, list2, c);`

6. Write a c++ function that return the average if an array elements.

7. Write a c++ function that perform addition operation of 2 arrays and store the result in another array .