

1. (25 pts) Complete the following code.

```
#include <iostream>
#include <cmath>
using namespace std;

int main(){
//declare an array of 5 integers

//assign 3 to the first element of the array

//assign -1 to the last element of the array

//swap the first and second element of the array


//display all the odd integers of the array
for(          ;          ;          ){

}

//declare a matrix of doubles with 5 rows and 5 columns


//display the numbers that are on the first column
for(          ;          ;          ){

}

int sumCol = 0;
//add the numbers on the first and last column
for(          ;          ;          ){

    }
```

```
//display the square root of each element of the matrix.
//The square root is displayed if and only if the number is not negative.
for(          ;          ;          ){
for(          ;          ;          ){
    if(          ){ //number is not negative

    }
}
cout << endl;
}

return 0;
}
```

2.(25 pts) What is displayed?

```
#include <iostream>
using namespace std;

int add(int, int);
void message(string);

int main(){
    string ma="ADDITION";
    string mb="a+b=b+a";
    message(ma);
    message(mb);
    int a=9;
    int res = add(9, a);
    message("9+9=");
    cout << res;
    return 0;
}

int add(int x, int y){
    return x+y;
}

void message(string s){
    cout << s << endl;
}
```

3.(25 pts) What is displayed?

```
1. #include <iostream>
2. using namespace std;
3. void swap(int&, int&, int);
4.
5. int main(){
6.     int x=9, y=10, z=10;
7.     cout << x << y << z;
8.     swap(x, y, z);
9.     cout << x << y << z;
10.    return 0;
11.}
12.
13. void swap(int& a, int& b, int c){
14.     int holder=a;
15.     a = b;
16.     b = holder;
17.     c = holder;
18.}
```

4. (25 pts) Use the third problem to answer the following questions.

a) Which line(s) contain a function prototype? (Answer the line number and copy the function prototype.)

b) Which line(s) contain a function call? (Answer the line number and copy the function prototype.)

c) List the reference parameters in the function swap.

