Review for Exam 2 Written Part

1. Write a function that returns the sales tax, given the price of an item. Assume a global constant called SALES\_TAX\_RATE has already been declared.
2. A health club membership is $40 per month. Write a function call to calculate the cost of a year membership. Display the result returned. The function header is as follows:

double CalculateCost(double memberRate, int months)

1. Write a prototype for a void function called Calculate. The function should have three parameters: a double, a reference to a double, and an int which has a default argument of 2.
2. Write the function heading for a void function called Max that has three int paramenters, num1, num2, and greatest. The first two parameters receive data from the caller and greatest returns a value. Be sure to indicate which parameters are pass by value and which are pass by reference with the appropriate syntax.
3. Define an array of integers containing the first five odd numbers.
4. Write a statement that stores the value 10 in the last element of the array.
5. Write a loop printing out the contents of the above array.
6. Write a loop counting the number of elements in the above array that are even.
7. Write a function prototype for a function called Equals that takes two arrays of type int and returns a bool result. The array parameters are input only and should not be allowed to change in the function.
8. By default, vectors and arrays passed to functions differently. Explain the difference.
9. Given the following statements:

vector <int> scores = { 89, 77, 93, 85 };

scores.pop\_back();

scores.push\_back(88);

scores.push\_back(82);

* 1. After these statements execute, what is the contents of the vector scores?
  2. How would you access the number of elements in scores?
  3. How would you access the element at index 0?

1. If you were to write a function that would pass the vector as an argument, would you need to pass another argument with the number of elements? Why or why not?
2. What is the difference between a class and an instance of a class?
3. Look at the following function header for a member function.

double Circle::getRadius()

1. What is the name of the function?
2. What is the class the function is a member of?
3. Given the following declaration:

class Dice{

private:

int spots;

public:

Dice();

int GetSpots();

void Roll();

};

Suppose the main part of your program contains the following declarations.

Dice die1, die2;

Which of the following statements are legal?

1. die1.spots = 4;
2. die2.Roll();
3. die1 = die2;
4. cout << Die1.GetSpots();
5. Given the following declaration:

class Money{

private:

int dollars;

int cents;

public:

Money();

void Display();

void SetAmount(int dollars, int cents); };

1. Write the class function definition for the display function, displaying the dollars and cents to look like money.
2. Add a declaration for a second constructor that takes two parameters to initialize the dollars and cents.
3. Write the class function definition for the second constructor.