1. T/F (8 of these)

a. A class declaration takes up space in memory

b. The default access specification for class members is private

c. The function definitions of member functions are stored in the class header file

d. A class can only have one copy constructor

e. It is possible to overload the + operator with a function that has the following function header: Class operator+ (const Class & a, const Class & b);

2. Reading code

Given the following function declarations for the class Num:

class Num

{

private:

int n;

public:

Num(int i = 0) {n = i;}

Num(const Num & in){n = in.n;}

Num operator+ (const Num & in) {this->n += in.n; return \*this;}

Num operator+ (int i) { Num temp(i); return temp;}

Num operator= (const Num & in) {return \*this;}

};

Show which of the member functions will be used for each line of code:

1. Num one;
2. Num two = one;
3. Num four = one + two;
4. one = one + 5;

3. Writing code

Given a class Circle:

class Circle

{

private:

double radius;

int centerX;

int centerY;

public:

};

Add any member data or function such that the following can be done in main

Circle c1; // c1 is centered at (0,0) and has radius 1

cout << c1.getArea(); // prints area of c1

c1 = c1 \* 5; // radius is 5 times larger

Circle c2(5,1,7); // c2 is centered at (5,1) and has radius 7

c1 = c2; // c1 is a copy of c2

c1.print(); // prints x, y, and radius of c1