2020\_2\_C++\_11\_과제

20175105 곽영주

1.

|  |
| --- |
| **소스코드:**  #include <iostream>  #include <string>  using namespace std;  class Book {  string title;  int price, pages;  public:  Book(string title = "", int price = 0, int pages = 0) {  this->title = title;  this->price = price;  this->pages = pages;  }  void show() {  cout << title << " " << price << "원 " << pages << "페이지" << endl;  }  string getTitle() {  return title;  }  Book& operator += (int p) {  price += p;  return \*this;  }  Book& operator -= (int p) {  price -= p;  return \*this;  }  bool operator == (int p) {  if (price == p)  return true;  return false;  }  bool operator == (string t) {  if (title == t)  return true;  return false;  }  bool operator == (Book b) {  if (title == b.title && price == b.price && pages == b.pages)  return true;  return false;  }  };  int main() {  Book a("청춘", 20000, 300);  Book b("미래", 30000, 500);  a += 500;  b += 500;  a.show();  b.show();  Book a1("명품 C++", 30000, 500);  Book b1("고품 C++", 30000, 500);  if (a1 == 30000)  cout << "정가 30000원" << endl;  if (a1 == "명품 C++")  cout << "명품 C++ 입니다." << endl;  if (a1 == b1)  cout << "두 책이 같은 책입니다." << endl;  return 0;  } |
| **실행결과:** |

2.

|  |
| --- |
| **소스코드:**  #include <iostream>  using namespace std;  class Matrix {  int ar[4];  public:  Matrix() {  for (int i = 0; i < 4; i++)  ar[i] = 0;  }  Matrix(int a1, int a2, int b1, int b2) {  ar[0] = a1;  ar[1] = a2;  ar[2] = b1;  ar[3] = b2;  }  void show() {  cout << "Matrix = { ";  for (int i = 0; i < 4; i++)  cout << ar[i] << " ";  cout << " }" << endl;  }  friend Matrix operator +(Matrix a, Matrix b);  friend Matrix& operator +=(Matrix& a, Matrix b);  friend int\* operator >>(Matrix a, int\* x);  friend Matrix& operator <<(Matrix& b, int\* y);  };  Matrix operator +(Matrix a, Matrix b) {  Matrix temp;  for (int i = 0; i < 4; i++)  temp.ar[i] = a.ar[i] + b.ar[i];  return temp;  }  Matrix& operator +=(Matrix& a, Matrix b) {  for (int i = 0; i < 4; i++)  a.ar[i] += b.ar[i];  return a;  }  int\* operator >>(Matrix a, int\* x) {  for (int i = 0; i < 4; i++)  x[i] = a.ar[i];  return x;  }  Matrix& operator <<(Matrix& b, int\* y) {  for (int i = 0; i < 4; i++)  b.ar[i] = y[i];  return b;  }  int main() {  Matrix a(1, 2, 3, 4), b(2, 3, 4, 5), c;  c = a + b;  a += b;  a.show();  b.show();  c.show();  int x[4], y[4] = { 5,6,7,8 };  a >> x;  b << y;  for (int i = 0; i < 4; i++)  cout << x[i] << " ";  cout << endl;  b.show();  return 0;  } |
| **실행결과:** |

3.

|  |
| --- |
| **소스코드:**  #include <iostream>  using namespace std;  class Circle {  int radius;  public:  Circle(int radius = 0) {  this->radius = radius;  }  void show() {  cout << "radius = " << radius << "인 원" << endl;  }  friend Circle operator ++(Circle& c, int n);  friend Circle& operator ++(Circle& c);  friend Circle operator +(int x, Circle c);  };  Circle operator ++(Circle& c, int n) {  Circle temp = c;  c.radius++;  return temp;  }  Circle& operator ++(Circle& c) {  c.radius++;  return c;  }    Circle operator +(int x, Circle c) {  Circle temp;  temp.radius = x + c.radius;  return temp;  }  int main() {  Circle a(5), b(4);  ++a;  b = a++;  cout << "Circle 객체 : ++a" << endl;  a.show();  cout << "Circle 객체 : b = a++" << endl;  b.show();  b = 1 + a;  cout << "Circle 객체 : b= 1 + a" << endl;  b.show();  return 0;  } |
| **실행결과:** |