Q23)

#include <iostream>

#include <cmath>

using namespace std;

class Triangle

{

float a, b, c, base, height;

public:

Triangle()

{

a = 0;

b = 0;

c = 0;

base = 0;

height = 0;

}

Triangle(float x, float y, float z)

{

a = x;

b = y;

c = z;

base = 0;

height = 0;

}

Triangle(float m, float n)

{

base = m;

height = n;

a = 0;

b = 0;

c = 0;

}

float area()

{

if (a == 0 && base == 0)

return 0;

float areaTriangle;

if (a == 0)

areaTriangle = 0.5 \* base \* height;

else

{

float s = (a + b + c) / 2.0;

areaTriangle = sqrt(s \* (s - a) \* (s - b) \* (s - c));

}

return areaTriangle;

}

bool operator==(Triangle T)

{

return a == T.a && b == T.b && c == T.c && base == T.base && height == T.height;

}

void operator=(Triangle &T)

{

a = T.a;

b = T.b;

c = T.c;

base = T.base;

height = T.height;

}

};

int main()

{

Triangle a(4, 3), b(6, 4, 8);

cout << "Area of a : " << a.area() << " sq.units" << endl;

cout << "Area of b : " << b.area() << " sq.units" << endl;

// Assignment operator

Triangle c = b;

cout << "Area of c : " << c.area() << " sq.units" << endl;

// Equality operator

if (c == b)

cout << "Triangles C and B are equal" << endl;

else

cout << "Triangles C and B are not equal" << endl;

return 0;

}