

Program solution

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/*  
 * Calculation of Pythagorean Theorem  
 */  
  
#include <iostream.h>  
#include <iomanip.h>  
#include <assert.h>  
#include <math.h>  
  
int main()  
{  
  
    double sideA=0 ,sideB=0;  
    double hypotenuse;  
  
    /*  
     * Start with reading input sides  
     */  
  
    cout << "\nPlease enter length of side A of triangle: ";  
    cin >> sideA;  
  
    assert(sideA>0); // Test if sideA is positive number  
  
    cout << "Please enter length of side B of triangle: ";  
    cin >> sideB;  
  
    assert(sideB>0); // Test if sideB is positive number  
  
    hypotenuse = sqrt( pow(sideA,2) + pow(sideB,2));  
    // can also be sqrt(sideA*sideA + sideB*sideB)  
  
    cout << setiosflags(ios::fixed) << setprecision(4);  
    // Set precision to 4 decimal digits  
  
    cout << "\nYou have entered side A = " << sideA << " and side B = "  
        <<<sideB<<".\n";  
    cout << "Hypotenuse of such triangle is " << hypotenuse<<endl;  
    return 1;  
  
}
```