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//File: triLength.cpp
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//Creation date: 2/1/2019
/* This program calculates length of triangle side c by using the law of
cosines.*/

#include <iostream>
#include <cmath>
using namespace std;

int main()
{
    double lengthA; //length of triangle side a
    double lengthB; //length of triangle side b
    double lengthC; //length of triangle side c
    double degreeAB; //degrees between sides a and b

    cout << "Enter length of side A: ";
    cin >> lengthA;

    cout << "Enter length of side B: ";
    cin >> lengthB;

    cout << "Enter angle between sides A and B (degrees): ";
    cin >> degreeAB;

    degreeAB = degreeAB * M_PI / 180;

    lengthC = sqrt( pow(lengthA , 2) + pow(lengthB , 2) - 2 * lengthA *
lengthB * cos (degreeAB));

    cout <<"length of side C is " << lengthC << endl;

    return 0;
}

```