#include <iostream.h>
#include <iomanip.h>
#include <math.h>

void main () {

    //******************************************************************
    //                      Value of an Investment
    // // This program computes the value of an initial investment
    // (principal) for a period of years between nMin and mMax if
    // invested at r%.
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    // Comp 170 Spring Semester 1998
    // Section 611
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    //******************************************************************

    float principal,              //dollar value of initial investment
         interestRate,           //interest rate
         amount,                 //value of investment after n years
         interestEarned;         //interest earned on principal

    int nMin,           //minimum number of years invested
         nMax,           //maximum number of years invested
         year;           //year counter

    cout << "Input the dollar amount of initial investment: ";
    cin >> principal;
    cout << "Input the interest rate: ";
    cin >> interestRate;
    cout << "Input the minimum number of years: ";
    cin >> nMin;
    cout << "Input the maximum number of years: ";
    cin >> nMax;
    cout << "Number of Years      Amount         Interest Earned
    ";
    year = nMin;
        while (year <= nMax) {
            amount = principal * pow(1.0 + interestRate,year);   //pow(x,y) is a built-in function
            //that returns the value x^y
            interestEarned = amount - principal;
            cout << setw(7) << year << "          " << setw(10) << amount << "          " << setw(10) << interestEarned << "\n";
            year++;
        }
}