

```

#include<bits/stdc++.h>
using namespace std;
#define P_I 3.1416
int main()
{
    // formula= $d\sin(\theta)=m\lambda$ ;
    double lambda, theta, d;
    cout << "Enter the wavelength (nm): ";
    cin>>lambda;
    cout << "Enter the angle (degrees): ";
    cin>>theta;
    cout << "Enter the distance between the slits (um): ";
    cin>>d;

    if (lambda < 380 || lambda > 750) // Check valid range
    {
        cout << "Out of the range. Please enter a valid number." << endl;
    }

    d=d*1e-6; // Convert distance from um to meters ;
    lambda=lambda*1e-9; // Convert wavelength from nm to meters ;
    double theta_rad=theta *(P_I/180.0); // Convert degrees to radians

    double M=(d*sin(theta_rad))/lambda;
    int Max_order=M;
    cout<<Max_order<< " -th the maxima order";
    return 0;
}

```