

```

#include<bits/stdc++.h>
using namespace std;
#define P_I 3.1416

int main()
{
    double theta=45.0;    // theta in degrees
    int m=1;    //For the first diffraction minimum
    double theta_rad=theta*(P_I/180.0);    // Convert degrees to radians

        // formula= $\sin(\theta)=m\lambda$ ;
        // ratio  $a/\lambda$  ;
    double Ratio=m/sin(theta_rad);    //Calculate the ratio of slit width to wavelength
    cout << "The ratio of the slit width to the wavelength is: "<<Ratio;
    return 0;
}

```