

```

// file: area.cpp
//
// This program calculates the area of a circle, given the radius.
//
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//
// Revision history:
//     02-Jan-2004  original version, for 780.20 Computational Physics
//     01-Jan-2005  minor updates to "To do" wishlist
//
// Notes:
// * compile with:  "g++ -o area area.cpp"
//
// To do:
// * output the answer with higher precision (more digits)
// * use the "predefined" value of pi or atan
// * define an inline square function
// * split the calculation into a function (subroutine)
// * output to a file (and/or input from a file)
//
//*****//

// include files
#include <iostream>           // note that .h is omitted
using namespace std;       // we need this when .h is omitted

//*****//

const double pi = 3.1415926535897932385;    // define pi

int
main ()
{
    double radius;

    cout << "Enter the radius of a circle: ";           // ask for radius
    cin >> radius;

    double area = pi * radius * radius;    // area formula

    cout << "radius = " << radius << ", area = " << area;

    return 0;           // successful completion
}

//*****//

```