//Computes the area of a circle and the volume of a sphere.

//Uses the same radius for both calculations.

#include <iostream>

#include <cmath>

using namespace std;

const double PI = 3.14159;

double area(double radius);

//Returns the area of a circle with the specified radius.

double volume(double radius);

//Returns the volume of a sphere with specified radius.

int main()

{

double radius\_of\_both, area\_of\_circle, volume\_of\_sphere;

cout << "Enter a radius to use for both a circle\n"

<< "and a sphere (in inches): ";

cin >> radius\_of\_both;

area\_of\_circle = area(radius\_of\_both);

volume\_of\_sphere = volume(radius\_of\_both);

cout << "Radius = " << radius\_of\_both << " inches\n"

<< "Area of circle = " << area\_of\_circle

<< " square inches\n"

<< "Volume of sphere = " << volume\_of\_sphere

<< " cubic inches\n";

return 0;

}

double area(double radius)

{

return (PI \* pow(radius, 2));

}

double volume(double radius)

{

return ((4.0 / 3.0) \* PI \* pow(radius, 3));

}