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/*
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Course: CSCI-135
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Assignment: HW2

*/

/*
Prompt for diameter and read user input
volume1 =  $\pi \times \text{diameter} \times \text{diameter} \times \text{diameter} / 6$ 
diameter++
volume2 =  $\pi \times \text{diameter} \times \text{diameter} \times \text{diameter} / 6$ 
growth = volume2 - volume1
Print growth
diameter++
volume3 =  $\pi \times \text{diameter} \times \text{diameter} \times \text{diameter} / 6$ 
growth = volume3 - volume2
Print growth
*/

#include <iostream>

using namespace std;

int main() {
    const double PI = 3.141592653589793;

    cout << "Diameter: ";
    int diameter = 0;
    cin >> diameter;

    int volume1 = 0;
    int volume2 = 0;
    int volume3 = 0;
    int growth = 0;

    volume1 = PI * diameter * diameter * diameter / 6;
    diameter++;
    volume2 = PI * diameter * diameter * diameter / 6;
    growth = volume2 - volume1;
    cout << "Increase: " << growth << endl;

    diameter++;

```

```
volume3 = PI * diameter * diameter * diameter / 6;  
growth = volume3 - volume2;  
cout << "Increase: " << growth << endl;  
  
return 0;  
}
```