CP1L2 Script and Output

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Listing 1: CP1L2 Script

```
/*
 * ============================================================================
 *
 *       Filename:  CP1L2_MBROD.cpp
 *       Assignment: C++ Lab #1 Part 2
 *       Title: Circular Calculator
 *
 *    Description:  Calculates circumference and area until user
requests loop to stop
 *
 *        Version:  1.0
 *        Created:  11/01/2022
 *       Revision:  none
 *       Compiler:  GCC
 *
 *         Author:  M. Brodskiy
 *
 * ============================================================================
 */

#include <iostream> // Include header file for input/output
#include <iomanip>  // Include header file to manipulate input
#include <cmath>    // Include header file for more math function
#include <string>   // Include header file for string variable

using namespace std; // Declare standard namespace use

// Declare Variables
double pi = 3.1415926535898;
double r, c, a; // radius, circumference, area
```

```
30 string ans("Yes");
31
32 // Main Program
33 int main() {
34
35 // Introduce and explain the program for the user
36 cout << "Welcome to the Great Circular Calculator!" << endl;
37
38 do {
39
40     cout << "Please Enter a Radius Value: "; // Request a radius
   value from the user
41     cin >> r;
42
43     c = 2 * pi * r; // Calculate circumference and area
44     a = pi * pow(r, 2);
45
46     cout << scientific << setprecision(3); // Set cout to scientific
   and set precision
47
48     cout << "The circumference is: " << c << endl; // Print out
49     cout << "The area is: " << a << endl; // calculated info
50
51
52 // Ask user if they would like to calculate again
53 cout << "Would you like to make another calculation?" << endl;
54
55 cout << "Enter 'Yes' or 'No': ";
56 cin >> ans;
57
58 } while(ans!="No");
59
60 }
```

Listing 2: CP1L2 Output

```
1 Welcome to the Great Circular Calculator!
2 Please Enter a Radius Value: 1
3 The circumference is: 6.283e+00
4 The area is: 3.142e+00
5 Would you like to make another calculation?
6 Enter 'Yes' or 'No': Yes
7 Please Enter a Radius Value: 4
8 The circumference is: 2.513e+01
9 The area is: 5.027e+01
```

```
10 Would you like to make another calculation?
11 Enter 'Yes' or 'No': No
```