

```

/* Sample program in C
*
* Sample run of this code gives:

        Sample C program. Please enter a float (e.g. 3.14): 3.54
        That number is 3.5
        That number is now 4.54

*/
#include <stdio.h>

#define true 1    // true and false are not defined in C
                  // Could use this as: while( true) ....

//-----
// Add one to the reference parameter. In C for reference
// parameters we must:
// 1. Pass with an ampersand
// 2. Catch with an asterisk
// 3. Use with an asterisk
// Changes to a reference parameter are reflected back
void addOne( float *theNumber)    // Catch with an asterisk
{
    *theNumber = *theNumber + 1.0;    // Using with an asterisk
}

//-----
int main()
{
    float inputNumber;
    printf("Sample C program. Please enter a float (e.g. 3.14): ");
    scanf("%f", &inputNumber);    // don't forget the &
                                   // Other formats: %d for int,
                                   // %s for string, %c for char

    // Display float number in field of width 2 with 1 decimal
    printf("That number is %2.1f \n", inputNumber);

    // Add one to that number, using a C reference parameter so that
    // change is reflected back to the code here
    addOne( &inputNumber);
    // Change the number of decimal places shown in output

    printf("That number is now %3.2f \n", inputNumber);

    system("pause");    // for DevC++
}

```

```

/* Sample program in C++
*
* Sample run of this code gives:

        Sample C program. Please enter a float (e.g. 3.14): 3.54
        That number is 3.5
        That number is now 4.54

*/
#include <iostream>
using namespace std;

// true and false are predefined in C++

//-----
// Add one to the reference parameter. In C++ for reference
// parameters we must:
// 1. Add an ampersand between the type and the parameter name
// 2. Use with an asterisk
// Changes to a reference parameter are reflected back
void addOne( float &theNumber)
{
    theNumber = theNumber + 1.0;
}

//-----
int main()
{
    float inputNumber;
    cout << "Sample C program. Please enter a float (e.g. 3.14): ";
    cin >> inputNumber;

    // Display float number in field of width 2 with 1 decimal
    cout.setf(ios::fixed);
    cout.setf(ios::showpoint);
    cout.precision(1);
    cout << "That number is " << inputNumber << endl;
    // Using endl flushes the output buffer and gives a newline

    // Add one to that number, using a C++ reference parameter
    // so that the change is reflected back to the code here
    addOne( inputNumber);
    // Change the number of decimal places shown in output
    cout.precision(2);
    cout << "That number is now " << inputNumber << endl;

    system("pause");    // for DevC++
}

```