

```
Microsoft Visual Studio Debug Console

In main, value is 4
Now calling doubleNum...
Now back in main using pass by reference, value is 2
Now calling doubleNum_V2...
Now back in main using pass by pointer, value is 4
Now calling doubleNum_V3...
Now back in main using pass by value, value is 24

C:\Users\Sean\Desktop\Coding\Passing_Vars\x64\Debug\Passing_Vars.exe (process 19812) exited with code 0.
Press any key to close this window . . .
```

Header File: Passing.h

#pragma once

class Passing

{

private:

public:

void doubleNum(int& refVar);

void doubleNum_V2(int* refVar2);

int doubleNum_V3(int refVar0);

};

Implementation File: Passing.cpp

```

#include "Passing.h"

// This program uses a reference variable as a function parameter.

#include <iostream>

#include <cmath>

using namespace std;

/*****
*           doubleNum           *
* This function's parameter is a reference variable. The & *
* tells us that. This means it receives a reference to the *
* original variable passed to it, rather than a copy of that *
* variable's data. The statement refVar *= 2 is doubling the *
* data stored in the value variable defined in main.      *
*****/

void Passing::doubleNum(int& refVar) // Passing by reference because & is used
{
    refVar = 2;
}

void Passing::doubleNum_V2(int* refVar2)
{
    *refVar2 = pow(*refVar2, 2); // don't forget to dereference
}

int Passing::doubleNum_V3(int refVar0)
{
    refVar0 = refVar0 * 6;
    return refVar0;
}

```

EndUserDriver: EndUserDriver.cpp

```
#include "Passing.h"

#include <iostream>

using namespace std;

int main()
{
    Passing p;

    int value = 4;
    int* value1 = &value;

    cout << "In main, value is " << value << endl;
    cout << "Now calling doubleNum..." << endl;
    p.doubleNum(value);
    cout << "Now back in main using pass by reference, value is " << value << endl;

    cout << "Now calling doubleNum_V2..." << endl;
    p.doubleNum_V2(value1);
    cout << "Now back in main using pass by pointer, value is " << value << endl;

    cout << "Now calling doubleNum_V3..." << endl;
    value = p.doubleNum_V3(value); // must set value to equal the method called so that when it returns a
    value to main the value is changed
    cout << "Now back in main using pass by value, value is " << value << endl;

    return 0;
}
```

