Mathematical Library Functions

In the last section we saw how the string class had many built-in functions that could be called for our use.

The library **cmath** has many of the mathematical functions that your graphing calculator has but for the c++ environment.

In order to use these functions we need a new compiler directive

```
#include <math>
```

All of these use what are known as function calls in order to perform the operation in question while taking an input of the values needed.

In the future we will be writing out own functions to perform repetitive tasks in our programs.

Examples of these types of functions would be the square root function.

We are used to our calculator performing the operation but there is an entire mathematical process behind actually finding the square root of an inputted number.

For us the process looks like this:

```
cout << "Enter the first number: ";
cin >> first;
answer = sqrt(first);
cout << endl << "The square root of the first number
is " << answer << endl << endl;
```

Note how the function name is called **sqrt** and it is passed the value of the first number in the parenthesis.

All we need to know is the function came, and what it is expecting in the parenthesis to be able to use it!

Much much more on functions to come!