Complex Absolute

> This is a **warmup** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

In this activity you need to complete the function `complexAbsolute` in the provided program.

Download `complexAbs.c`, or copy it into your current directory on a CSE system by running

```
$ cp /web/cs1511/17s2/week06/files/complexAbs.c .
```

In this exercise you have been provided with a `struct` to represent a Complex Number, called `complex`. Read the provided file and understand the given data structure.

You have also been given a `main` function and an incomplete `double complexAbsolute(complex c)`. You must edit this function so that it returns the magnitude/absolute value of the complex number it has been given.

The formula for the magnitude of a complex number $z = x + iy$ is

$$r = |z| = \sqrt{x^2 + y^2}$$

> We've `#include` d a new header file, `<math.h>`. This declares a function, `double sqrt(double x)`, which returns the square root of `x`.

Some Examples

```
Enter the real part: 3
Enter the imaginary part: 4
The absolute value is 5.00.
```

```
Enter the real part: 17
Enter the imaginary part: 17
The absolute value is 24.04.
```

To run some simple automated tests:

```
$ 1511 autotest complexAbs
```

To run Styl-o-matic:

```
$ 1511 stylomatic complexAbs.c
Looks good!
```

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk06_complexAbs
```

Or, if you are working from home, upload the relevant file(s) to the `wk06_complexAbs` activity on Give Online.