Files to submit: **complex_mult.c**
Time it took Matthew to complete: 5 minutes

- All programs must compile without warnings when using the -Wall and -Werror options
- Submit only the files requested
  - Do **NOT** submit folders or compressed files such as .zip, .rar, .tar, .targz, etc
- Your program must match the output exactly to receive credit.
  - Make sure that all prompts and output match mine exactly.
  - Easiest way to do this is to copy and paste them
- All input will be valid unless stated otherwise
- The examples provided in the prompts do not represent all possible input you can receive.
- All inputs in the examples in the prompt are underlined
  - You don't have to make anything underlined it is just there to help you differentiate between what you are supposed to print and what is being given to your program
- If you have questions please post them on Piazza

In this program you will multiply two complex numbers together. A complex number has the form

$$ai + b$$

where

a is the imaginary part
b is the real part
i represents $\sqrt{-1}$

Write a program that accepts two complex numbers, multiplies them together and then displays the result.

Notes: There may be any number of spaces between the numbers, i, and the plus sign and your program should be able to handle that.

Hint: Don't forget that $i * i = \sqrt{-1} * \sqrt{-1} = -1$.

Examples:

1. `Enter the first complex number in the form ai + b: 5i + 3`
   `Enter the second complex number in the form ai + b: 2i + 4`
   `(5i + 3) * (2i + 4) = 26i + 2`
2. `Enter the first complex number in the form ai + b: 10  i + 3`
   `Enter the second complex number in the form ai + b: 6i+1`
   `(10i + 3) * (6i + 1) = 28i + -57`
3. `Enter the first complex number in the form ai + b: 1i+2`
   `Enter the second complex number in the form ai + b: 3  i  +    4`
   `(1i + 2) * (3i + 4) = 10i + 5`