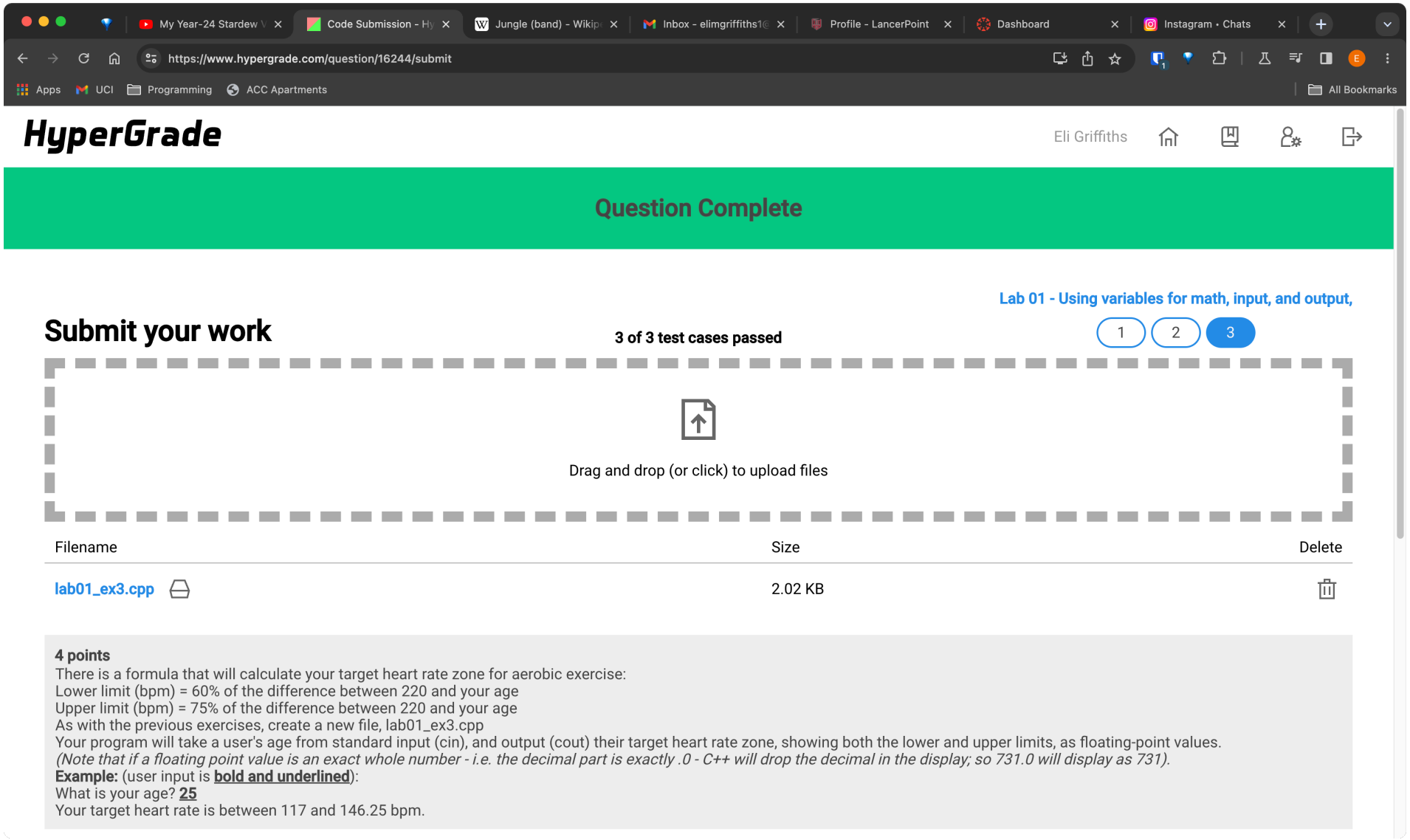
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Code Submission - Hy
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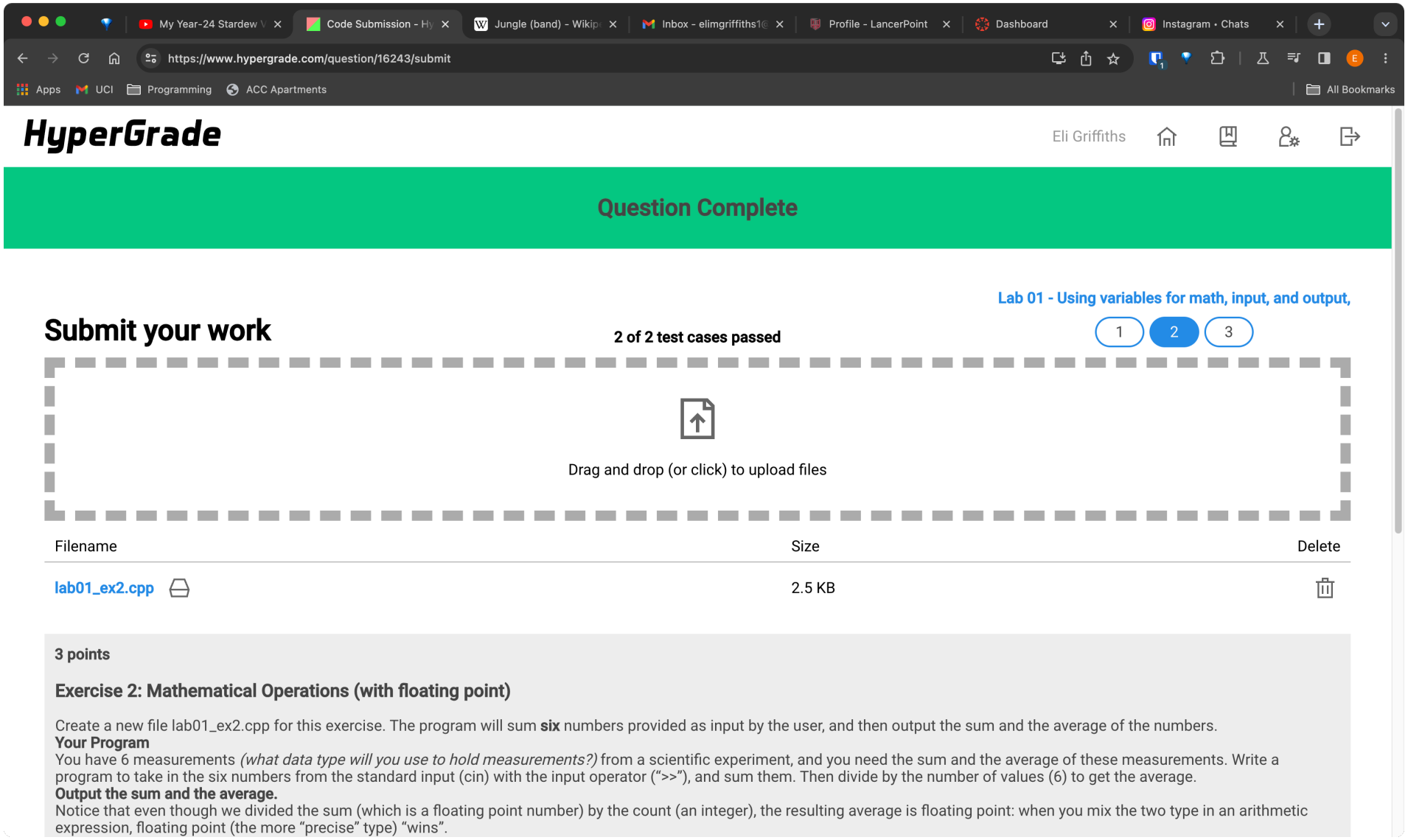
Question Complete
Lab 01 - Using variables for math, input, and output,
1
2
3
Submit your work
3 of 3 test cases passed
Drag and drop (or click) to upload files
Filename
Size
Delete
lab01_ex3.cpp
2.02 KB
4 points
There is a formula that will calculate your target heart rate zone for aerobic exercise:
Lower limit (bpm) = 60% of the difference between 220 and your age
Upper limit (bpm) = 75% of the difference between 220 and your age
As with the previous exercises, create a new file, lab01_ex3.cpp
Your program will take a user's age from standard input (cin), and output (cout) their target heart rate zone, showing both the lower and upper limits, as floating-point values.
(Note that if a floating point value is an exact whole number - i.e. the decimal part is exactly .0 - C++ will drop the decimal in the display; so 731.0 will display as 731).
Example: (user input is bold and underlined):
What is your age? 25
Your target heart rate is between 117 and 146.25 bpm.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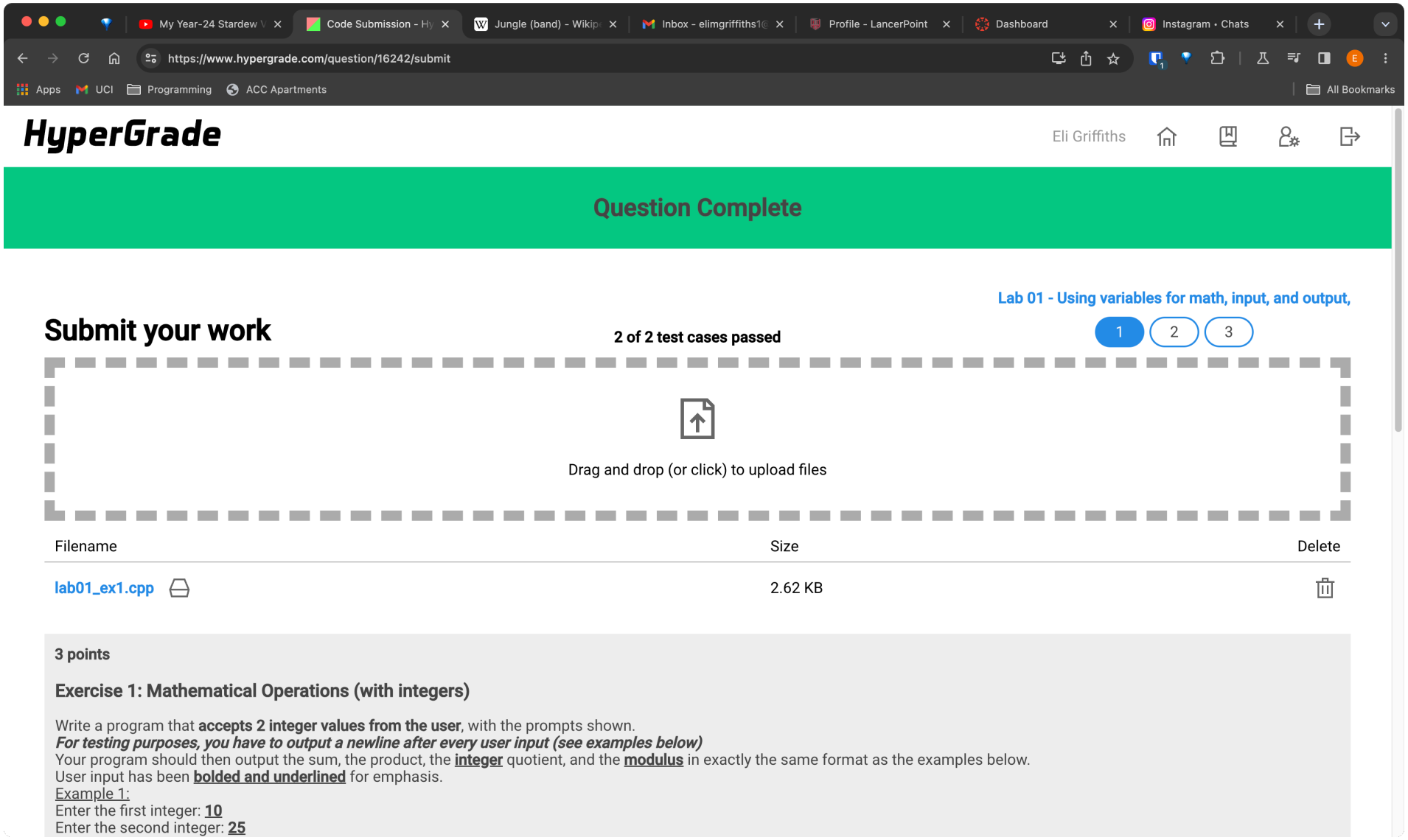
Question Complete
Lab 01 - Using variables for math, input, and output,
1
2
3
Submit your work
2 of 2 test cases passed
Drag and drop (or click) to upload files
Filename
Size
Delete
lab01_ex2.cpp
2.5 KB
3 points
Exercise 2: Mathematical Operations (with floating point)
Create a new file lab01_ex2.cpp for this exercise. The program will sum six numbers provided as input by the user, and then output the sum and the average of the numbers.
Your Program
You have 6 measurements (what data type will you use to hold measurements?) from a scientific experiment, and you need the sum and the average of these measurements. Write a program to take in the six numbers from the standard input (cin) with the input operator (">>"), and sum them. Then divide by the number of values (6) to get the average.
Output the sum and the average.
Notice that even though we divided the sum (which is a floating point number) by the count (an integer), the resulting average is floating point: when you mix the two type in an arithmetic expression, floating point (the more "precise" type) "wins".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Question Complete
Lab 01 - Using variables for math, input, and output,
1
2
3
Submit your work
2 of 2 test cases passed
Drag and drop (or click) to upload files
Filename
Size
Delete
lab01_ex1.cpp
2.62 KB
3 points
Exercise 1: Mathematical Operations (with integers)
Write a program that accepts 2 integer values from the user, with the prompts shown.
For testing purposes, you have to output a newline after every user input (see examples below)
Your program should then output the sum, the product, the integer quotient, and the modulus in exactly the same format as the examples below.
User input has been bolded and underlined for emphasis.
Example 1:
Enter the first integer: 10
Enter the second integer: 25

HyperGrade

Sophie Chen

Question Complete

Lab 01 - Using variables for math, input, and output,

1 2 3

Submit your work

2 of 2 test cases passed

Drag and drop (or click) to upload files

Filename	Size	Delete
main.cpp	842 Bytes	

3 points

Exercise 1: Mathematical Operations (with integers)

Write a program that **accepts 2 integer values from the user**, with the prompts shown.
For testing purposes, you have to output a newline after every user input (see examples below)
Your program should then output the sum, the product, the **integer** quotient, and the **modulus** in exactly the same format as the examples below.
User input has been **bolded and underlined** for emphasis.
Example 1:
Enter the first integer: **10**
Enter the second integer: **25**
10 + 25 = 35
10 * 25 = 250
10 / 25 = 0
10 % 25 = 10
Example 2:
Enter the first integer: **15**
Enter the second integer: **5**
15 + 5 = 20
15 * 5 = 75

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Sophie Chen

Question Complete

Lab 01 - Using variables for math, input, and output,

1 2 3

Submit your work

2 of 2 test cases passed

Drag and drop (or click) to upload files

Filename	Size	Delete
main.cpp	661 Bytes	

3 points

Exercise 2: Mathematical Operations (with floating point)

Create a new file lab01_ex2.cpp for this exercise. The program will sum **six** numbers provided as input by the user, and then output the sum and the average of the numbers.
Your Program
You have 6 measurements *(what data type will you use to hold measurements?)* from a scientific experiment, and you need the sum and the average of these measurements. Write a program to take in the six numbers from the standard input (cin) with the input operator (">>"), and sum them. Then divide by the number of values (6) to get the average.
Output the sum and the average.
Notice that even though we divided the sum (which is a floating point number) by the count (an integer), the resulting average is floating point: when you mix the two type in an arithmetic expression, floating point (the more "precise" type) "wins".
Example: If your 6 numbers are 1.5, 2.1, 3.8, 4.2, 5.7, 6.1
Your output should look like this (user input is **bolded and underlined**):
Enter six fp numbers on a single line, separated by spaces: **1.5 2.1 3.8 4.2 5.7 6.1**
Sum of 1.5 + 2.1 + 3.8 + 4.2 + 5.7 + 6.1 = 23.4
Average = 3.9

Test Case 1 Passed!

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Sophie Chen

Question Complete

Lab 01 - Using variables for math, input, and output,

1 2 3

Submit your work

3 of 3 test cases passed

Drag and drop (or click) to upload files

Filename	Size	Delete
main.cpp	472 Bytes	

4 points
There is a formula that will calculate your target heart rate zone for aerobic exercise:
Lower limit (bpm) = 60% of the difference between 220 and your age
Upper limit (bpm) = 75% of the difference between 220 and your age
As with the previous exercises, create a new file, lab01_ex3.cpp
Your program will take a user's age from standard input (cin), and output (cout) their target heart rate zone, showing both the lower and upper limits, as floating-point values.
(Note that if a floating point value is an exact whole number - i.e. the decimal part is exactly .0 - C++ will drop the decimal in the display; so 731.0 will display as 731).
Example: (user input is **bold and underlined**):
What is your age? **25**
Your target heart rate is between 117 and 146.25 bpm.

Test Case 1 Passed!

```
What is your age: 25ENTER
Your target heart rate is between 117 and 146.25 bpm.\n
```