The function mySum is supposed to return the sum of a list of numbers (and 0 if that list is empty), but it has one or more errors in it. Use this space to write test cases to determine what errors there are. You will be using this information to answer the next set of multiple choice questions.

test-4-1: Which of the following cases fail for the mySum function?

Top of Form

A. an empty list  
B. a list with one item  
C. a list with more than one item

Bottom of Form

✔️Correct.

1. Correct, 0 is not returned if the function is given an empty list.
2. Correct, a list with more than one item does not provide the correct response.

test-4-2: Are there any other cases, that we can determine based on the current structure of the function, that also fail for the mySum function?

Top of Form

A. Yes  
B. No  
ans :B

Bottom of Form

✔️ Correct. At the moment we can't tell if other cases would fail (such as combining integers and floats), but it is possible that the function could have more issues once the current issues are fixed.

**The class Student is supposed to accept two arguments in its constructor:**

1. A name string
2. An optional integer representing the number of years the student has been at Michigan (default:1)

**Every student has three instance variables:**

1. *self.name* (set to the name provided)
2. *self.years\_UM* (set to the number of years the student has been at Michigan)
3. *self.knowledge* (initialized to 0)

**There are three methods:**

* *.study()* should increase self.knowledge by 1 and return None
* *.getKnowledge()* should return the value of self.knowledge
* *.year\_at\_umich()* should return the value of self.years\_UM

There are one or more errors in the class. Use this space to write test cases to determine what errors there are. You will be using this information to answer the next set of multiple choice questions.

test-4-3: Which of the following cases fail for the Student class?

Top of Form

A. the method study does not return None  
B. the optional integer in the constructor is not optional  
C. the attributes/instance variables are not correctly assigned in the constructor  
D. the method study does not increase self.knowledge  
E. the method year\_at\_umich does not return the value of self.years\_UM

Bottom of Form

✔️Correct.

1. Correct! The constructor does not actually use the optional integer that is provided. Instead it sticks with using the default value.
2. Correct! Study does not increase the self.knowledge.

test-4-4: Are there any other cases, that we can determine based on the current structure of the class, that also fail for the Student class?

Top of Form

A. Yes  
B. No  
ans:A

Bottom of Form

✔️ Correct! There is an issue with the getKnowledge method because it returns None when self.knowledge is 0, even though it returns the correct value when self.knowledge is non-zero.