

Answers to Questions from TT1.2

Name:

Student ID:

- **Desk Check Task: Calculate Bill Total**

Required Variables:

Real (floating point):

appetizer_price, main_price, dessert_price

total_price

Pseudocode:

Read the value of appetizer_price

Read the value of main_price

Read the value of dessert_price

total_price = appetizer_price + main_price + dessert_price

Print '\$' then the value of total_price to the terminal showing two decimal places.

Test Data:

	First data set	Second data set
<i>appetizer_price</i>	10.30	12.40
<i>main_price</i>	34.00	41.00
<i>dessert_price</i>	8.50	9.80

Expected Result:

	First data set	Second data set
<i>Output:</i>	\$52.80	\$63.20

Desk check - fill this in by completing the missing code in **bill_total.rb** (in the tasks Resources folder) then running it with the test data above:

	Statement	<i>appetizer _price</i>	<i>main _price</i>	<i>dessert _price</i>	<i>total _price</i>	<i>output</i>
<i>First Pass</i>	<i>Read the value of appetizer_price</i>	10.30				
	<i>Read the value of main_price</i>		34.00			
	<i>Read the value of dessert_price</i>			8.50		
	<i>Calculate the total_price</i>				52.80	
	<i>Convert to dollars</i>					\$52.80
	<i>Output the total_price</i>					\$52.80
<i>Second Pass</i>	<i>Read the value of appetizer_price</i>	12.40				
	<i>Read the value of main_price</i>		41.00			
	<i>Read the value of dessert_price</i>			9.80		
	<i>Calculate the total_price</i>				63.20	
	<i>Convert to dollars</i>					\$63.20
	<i>Output the total_price</i>					\$63.20

- **Short Answer Questions:**

Focus in the following on using the correct computing terminology.

Here are some terms that may help you: Assignment, evaluate, increment,

- Using a few sentences explain why it may be important to execute statements in the correct sequence. (eg: what might happen if the last statement in Program 2 was executed earlier)

2: The code `main_price = 10` is an example of which kind of programming statement?

Declaring a variable called `main_price` and giving it a value of 10

3: What **actions** does the computer perform when it executes `a = a + b`?

The computer first evaluates `a + b`

Then it takes the value, then declares a variable called `a` and stores the value within `a`.

4: How would the value of variable `i` change in the statement `i = i + 1`?

The value of `i` will be a new value evaluated by the old value of `i + 1`

5: *What sort of types will Ruby use to store the following variables (given the associated variable values)?*

	Data	Type
	A person's name e.g: "Fred Smith"	String
	Number of students in a class e.g: 23	Integer
	Average age of a group of people e.g: 23.5	Float
	A temperature in Celsius e.g: 45.7	Float
	True or false e.g: <code>1 == 2</code>	boolean

Note: possible types include: Integer, String, Float, Boolean

6: *Variables have a scope – what are two different scopes variables can have in Ruby?*

See the lesson materials for help with Question 6. You could also see:

Global variable can be referred to from anywhere in the program

Instance variables are local to specific instances of an object

https://www.tutorialspoint.com/ruby/ruby_variables.htm