Answers to Questions from TT1.2

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1. 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
appetizer_price	10.30	12.40
main_price	34.00	41.00
dessert_price	8.50	9.80

Expected Result:

	First data set	Second data set
Output:	$52.80	$63.20

Desk check - fill this in by hand-tracing/hand-executing the pseudocode provided with the test data above:

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

2. Complete Program Calculate Bill Total

Now check the actual code produces the output you expected

Do this by completing the missing code in **bill_total.rb** in **Task 1.3** then running the program.

3. Short Answer Questions:

Focus in the following on using the correct computing terminology.

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

1. 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)
   Ruby is a code needs to be in a correct order to work. If we don't follow order it will have errors.

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

This is an assignment statement

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

The computer first evaluates
Then it assigns a value

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

The value of i will be incremented

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: 1 == 2	Boolean

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

6: *Variables have a scope – what are two different scopes variables can have in Ruby?*
- Ruby Class Variables: this variable begins with @@.
- Ruby Instance Variables: this variable begins with @.

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

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