# PP Task 3.1 Code Tracing Additional Questions

**Name:** Replace with your name

1. How does *Code Sample 3* illustrate the importance of **sequence** for properly functioning code?

Calculating total cost before setting the number of items leads to the total cost not being calculated properly.

2. What happens to the value of the variable items after the assignment statement items = 19?

The Variable Items is set to the integer 19

3. What **actions** does the computer perform when it executes the statement w = z \* y from *Code Sample 4*?  
(**Hint:** Think in terms of what has been taught in class. You do *not* need to research what happens at the hardware level as that is outside the scope of the unit.)

The cpu calls z and y from memory, these integers are then multiplied together before being stored in memory as w

4. Assuming a variable x has been defined as an int, how would its value change in the statement x = x + 1?

The integer x would increase by 1

5. What are the value and type of the following expressions? Treat each row independently and use the provided variables for context. We have deliberately not stated variables’ types, so you may need to work that out from the values they are assigned. Note we have used multiple assignment to compactly declare and initialise multiple variables on one line.

Do not worry if Word autocorrects "straight quotes" to “smart quotes”; we will know what you mean. But if typing Python type names please do correct its auto-capitalisation (as those names should be lower case).

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| --- | --- | --- | --- |
| **Variable Values** | **Expression** | **Value** | **Data Type** |
|  | 11 | 11 | Int |
|  | 3.25 | 3.25 | Float |
|  | "Joe the Turtle" | “Joe the Turtle” | String |
|  | 1 + 9 / 3 | 4.0 | Float |
| x, y = 5, 8 | x \* y | 40 | Int |
| x = 2.5 | 3 \* x | 7.5 | Float |
| x, y = 1.9, 7 | 4 \* x - y | 0.6 | Float |
| x, y = 5.1, 0 | x + 1.9 \* y | 5.1 | Float |
| x, y, z = 7, 5, 3 | (x + y) / z | 4.0 | Float |
| x = "Chips" | x + "Fish " | “ChipsFish “ | String |
| x = "Arm" | f"Strong {x} Niel" | “Strong Arm Niel” | String |
| x = 3 | x \* "KIT500" | “KIT500KIT500KIT500” | String |

6. What is the most appropriate type to store the following?

|  |  |
| --- | --- |
| **Data** | **Most suitable type** |
| The title of a book | String |
| The number of attendees at a conference | Int |
| The median score for all courses completed in an academic year | Float |
| Goals scored by the winning team in a FIFA World Cup match | Int |
| The name of a train station | String |
| A person's exact weight in kilograms | Float |
| An employee’s ID number (includes the initial of their department) | String |
| A student's library card number | Int |
| A postal code, including any leading zeros | String (anything else will cut off leading zeros) |