Python Programming with Functions

|  |  |
| --- | --- |
| **Challenge Level** | **Challenge** |
| 5 | I can combine arrays, selection, iteration and Boolean with the use of functions. |
| 4 | I can combine selection and iteration with the use of functions. |
| 3 | I can explain the purpose of using functions within programs and incorporate user input as parameters that are passed to the function |
| 2 | I can define a function and pass two values into the function, returning one result, based on the two values passed in. |
| 1 | I can define a function and pass a value into that function to be used. I can then return a new value from the function, to the main part of the program. |

**Challenge 1**

|  |  |
| --- | --- |
| **Python Code:** | **Copy the code into Python…summarise what it does?** |
|  |  |
| **What might the ‘def’ command do?** |
|  |
| **What might happen if the function *introduction* was under the main program?** |
|  |
| **In the final line shown, why is the variable *varMyName* referenced?** |
|  |

**Challenge 2**

|  |  |
| --- | --- |
| **Python Code:** | **Copy the code into Python…summarise what it does?** |
|  |  |
| **How many values are passed into the function?** |
|  |
| **How many values are returned?** |
|  |
| **This example is not exactly an efficient use of a function…why?** |
|  |

**Challenge 3**

|  |  |
| --- | --- |
| **Python Code:** | **Copy the code into Python…summarise what it does?** |
|  |  |
| **How many values are passed into the function?** |
|  |
| **Why is this more efficient example of the use of a function, than the one in Challenge 2?** |
|  |
| **Edit the program to allow a user to input their own Base and Height Values** |

**Challenge 4**

|  |  |
| --- | --- |
| **Python Code:** | **Copy the code into Python…summarise what it does?** |
|  |  |
| **What are the if/elif statements being used to check and why?** |
|  |
| **There is use of Boolean (true/false) in this example…why is it used?** |
| **Instead of using four *selection* statements…try replacing them with a list *operators=[“\*”,”+”…] and use to compare the operator input to each value in the list and then output the appropriate result*** |

**Challenge 5**

|  |  |
| --- | --- |
| **Python Code:** | **Copy the code into Python…summarise what it does?** |
|  |  |
| **What is being passed back to the main program in this instance?** |
|  |
| **Try adding the line of code at the bottom of the main program:**  ***print(listPupils[1])***  **What might be the limitation related to the lists wihtin the function?** |
|  |