# Unit 2.1 Algorithms; Lesson 7 - Correcting and Completing Algorithms

## Activity 2; Low

An algorithm has been written that asks the user to enter the cost of a meal. The algorithm calculates 10% of the total for the tip. It then outputs the total cost of the meal, plus the tip.

mealCost = input("Enter the cost of the meal")

tip = .......... \* 0.1

totalCost = ........... + ............

print("The total cost is " & ...............)

## Activity 2; Medium

An algorithm has been written that lets the user enter their yearly salary and it outputs approximately how much they would receive after tax.

They pay no tax on the first £10600. The next £21185 is taxed at 20%. The next £118215 is taxed at 40%. Any higher earnings than this are taxed at 45%.

salary = ..............("Enter your salary")

moneyReceived = ..............

if salary > 10600 then

moneyReceived = 10600

salary = salary – 10600

else

moneyReceived = salary

salary = 0

endif

if salary > .............. then

moneyReceived = ....................... + (21185 \* 0.8)

salary = salary – 21185

else

...................... = moneyReceived + (salary \* 0.8)

salary = 0

endif

if salary > 118215 then

moneyReceived = moneyReceived + (118215 \* 0.6)

salary = ..............................

else

moneyReceived = moneyReceived + (salary \* 0.6)

endif

if salary > 0 then

moneyReceived = moneyReceived + .........................

salary = 0

endif

print (............................)

## Activity 2;High

An algorithm has been written that stores 10 numbers, in two arrays (array1 and array2). The algorithm adds together the corresponding values in each array, e.g. the first element in array1 and array2, then the second element in array1 and array 2 etc. The result is stored in a third array (array3).

The algorithm outputs the largest and smallest number in array3.

for x = 0 to 9

array3[x] = array1[x] + .............

next x

largest = 0

smallest = ...........

for y = 0 to 9

if array[x] > ........... then

largest = array[x]

elseif array[x] < ........... then

....................................

endif

next y

print ("The smallest is " & smallest)

print(.................................)

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