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

## Lesson 1; Low

An algorithm is written to take as input the number of miles travelled. The algorithm works out how much this will cost, with each mile costing £0.30 in petrol. If this is greater than £10.00 then it is reduced by 10%.

miles = input("Enter the number of miles)

cost = 0.3

if cost = 10 then

cost = cost \* 0.1

endif

print(cost)

There are **four** errors in this algorithm. Identify each error and correct it.

## Lesson 1; Medium

An algorithm is written to read ten numbers from the user. It adds all ten numbers together and works out the average. The average is then output.

total = 1

for x = 0 to 10

number = input("Enter a number")

total = number

next x

average = total / number

print(average)

There are **four** errors in this algorithm. Identify each error and correct it.

## Lesson 1; High

An algorithm is written that asks the user to enter 20 numbers into an array. The algorithm then asks the user to enter a number to search for. The algorithm uses a serial search to count how many times that number appears in the array.

for x = 1 to 19

numbers[] = input("Enter a number")

next x

numberSearch = "What number are you looking for?")

quantity = 0

if numbers[count] <> numberSearch then

quantity = quantity + 1

endif

print (numberSearch " appears " quantity " times")

There are **nine** errors in this algorithm. Identify each error and correct it.

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