**Week 2 Question 2 – Big O notation and run-time**

Week 1 Question 1

**import** random  
  
**def shuffleArrays**():  
  
 array = [] (1)  
 maxArray = int(input("How many numbers would you like to input into an array? ")) (1)  
  
 **while** len(array) < maxArray : (n)  
 arrayq = input("Please input integers that you want to be shuffled :") (n)  
 array.append(arrayq) (n)  
  
 **if** len(array) > 1: (1)  
 index = len(array) - 1 (1)  
 **while** index > 0: (n)  
 ranInt = random.randint(0, index) (n)  
 array[index], array[ranInt] = array[ranInt], array[index] (n)  
 index -= 1 (n)  
 print("The shuffled array is :" ,array) (1)

O(n) 7n + 5

Week 1 Question 2

**def trailingZeros**():  
 number = int(input("Give me a number: ")) (1)  
  
 trailing = 0 (1)  
 **for** i **in** range(5, number+1): (n)  
 factorial = int(i) (n)  
 **while** factorial: (n\*n)  
 **if** factorial % 5 == 0: (n\*n)  
 trailing += 1 (n\*n)  
 factorial = factorial / 5 (n\*n)  
 **else**: (n\*n)  
 **break (**n\*n)print("There are ",trailing, "zeros") (1)  
  
  
trailingZeros()

O(n2) 6n2 + 2n + 3