

## 03 Handwritten

### For Loops

#### 1. Write the variable values for each loop iteration

```
breakfast = ['Apple', 'Coffee', 'Oats']  
coffees = 0  
count = 0  
last = None
```

```
for food in breakfast:  
    if food == 'Coffee':  
        coffees += 1  
    count += 1  
    print(count, coffees, food)
```

End of Loop	count	coffees	food
#1	1	0	Apple
#2			
#3			
#4			

#### 2. Using the below code, write code that will print the sum of all the numbers in the list and the average

```
numbers = [4, 6, 2, 6, 3]  
sum = 0
```

## While Loops

### 3. Write the variable values for each loop iteration

```
got_coffee = False
position_in_line = 3
minutes = 0
```

```
while not got_coffee:
    if position_in_line > 0:
        position_in_line -= 1
    else:
        got_coffee = True
        minutes += 1
    print(position_in_line, got_coffee, minutes)
```

End of Loop	position_in_line	got_coffee	minutes
#1			
#2			
#3			
#4			
#5			

### 4. Write a while loop that counts to 10 (inclusive) summing (adding) the numbers along the way

```
sum = 0
count = 0
```

## 03 Handwritten Answers

### For Loops

#### 1. Write the variable values for each loop iteration

```
breakfast = ['Apple', 'Coffee', 'Oats']  
coffees = 0  
count = 0  
last = None
```

```
for food in breakfast:  
    if food == 'Coffee':  
        coffees += 1  
    count += 1  
    print(count, coffees, food)
```

End of Loop	count	coffees	food
#1	1	0	Apple
#2	2	1	Coffee
#3	3	1	Oats
#4	-	-	-

#### 2. Using the below code, write code that will print the sum of all the numbers in the list and the average

```
numbers = [4, 6, 2, 6, 3]  
sum = 0
```

```
for n in numbers:  
    sum += n
```

```
print(sum)  
print(sum/len(numbers))
```

## While Loops

### 3. Write the variable values for each loop iteration

```
got_coffee = False
position_in_line = 3
minutes = 0
```

```
while not got_coffee:
    if position_in_line > 0:
        position_in_line -= 1
    else:
        got_coffee = True
        minutes += 1
    print(position_in_line, got_coffee, minutes)
```

End of Loop	position_in_line	got_coffee	minutes
#1	2	False	1
#2	1	False	2
#3	0	False	3
#4	0	True	4
#5	-	-	-

### 4. Write a while loop that counts to 10 (inclusive) summing (adding) the numbers along the way

```
sum = 0
count = 0
```

```
while count <= 10:
    sum += count
    count += 1
```