

```
def function_1(n: int) -> None:
    temp_list = list()
    for i in range(n**2):
        temp = 0
        for j in range(i):
            temp += j
        temp_list.append(temp)
    sum(temp_list)
```

| | |
|-------------------------------------|-------|
| <code>temp_list = list()</code> | 1 |
| <code>for i in range(n**2):</code> | n^2 |
| <code>temp = 0</code> | 1 |
| <code>for j in range(i):</code> | n |
| <code>temp += j</code> | 2 |
| <code>temp_list.append(temp)</code> | 1 |
| <code>sum(temp_list)</code> | n |

$$= 1 + n^2 (1 + n(2)) + n$$

$$= 1 + n^2 + 2n^3 + n$$

$$O(n^3)$$

```
def function_2(n: int) -> None:
    print(n)
    for i in range(n):
        temp_list = [j+i for j in range(n)]
        shuffle(temp_list)
        max(temp_list)
```

| | |
|--|---------|
| <code>print(n)</code> | 1 |
| <code>for i in range(n):</code> | n |
| <code>temp_list = [j+i for j in range(n)]</code> | n^2+n |
| <code>shuffle(temp_list)</code> | n |
| <code>max(temp_list)</code> | n |

$$= 1 + n (n^2 + n + n + n)$$

$$= 1 + n^3 + 3n^2$$

$$O(n^3)$$