1 PYTHON MODULE

1.1 Exercise 1

Determine the output of the three following blocks of Python code. Justify your answer with a short explanation.

```python
items = []
for i in [75, 237, 1821]:
    v, s = 0, str(i)
    for j in range(len(s)):
        v += int(str(s[j]))
    items.append(v)
print(items)
```

```python
ages = [('Bart', 25), ('Bob', 29), ('Jack', 30), ('Sarah', 22), ('Zoe', 19)]
x if x[1] > 25 else (x[0].upper(), x[1]) for x in ages if 'a' in x[0]
```

```python
import numpy as np
A = [[1, 3], [4, 3]]
B = [[2, 4], [2, 1]]
M = np.dot(A, B)
print(M)
```

1.2 Exercise 2

Explain what is underfitting and how we can prevent it from happening.