

```
In [2]: import pandas as pd
import numpy as np
data = pd.read_csv('measurements.csv')
print("Data:")
print(data)
```

Data:

	Month	Measurement1	Measurement2	Measurement3
0	Jan	10	20	30
1	Feb	15	25	35
2	Mar	20	30	40
3	Apr	25	35	45
4	May	30	40	50
5	Jun	35	45	55

```
In [3]: data_array = data[['Measurement1', 'Measurement2', 'Measurement3']].to_numpy()
print("\nData Array:")
print(data_array)
```

Data Array:

```
[[10 20 30]
 [15 25 35]
 [20 30 40]
 [25 35 45]
 [30 40 50]
 [35 45 55]]
```

```
In [8]: mean_values = np.mean(data_array, axis=0)
std_dev_values = np.std(data_array, axis=0)
max_values = np.max(data_array, axis=0)
min_values = np.min(data_array, axis=0)
print("\nMean Values:")
print(mean_values)
print("\nStandard Deviation Values:")
print(std_dev_values)
print("\nMaximum Values:")
print(max_values)
print("\nMinimum Values:")
print(min_values)
```

Mean Values:
[22.5 32.5 42.5]

Standard Deviation Values:
[8.53912564 8.53912564 8.53912564]

Maximum Values:
[35 45 55]

Minimum Values:
[10 20 30]

```
In [9]: constant = 10
modified_data = data_array + constant
sum_across_months = np.sum(data_array, axis=0)

print("\nModified Data (after adding constant):")
print(modified_data)
print("\nSum Across Months:")
print(sum_across_months)
```

Modified Data (after adding constant):
[[20 30 40]
[25 35 45]
[30 40 50]
[35 45 55]
[40 50 60]
[45 55 65]]

Sum Across Months:
[135 195 255]

```
In [10]: total_elements = data_array.size  
reshaped_data = np.reshape(data_array, (6, 3))  
  
print("\nReshaped Data:")  
print(reshaped_data)
```

Reshaped Data:

```
[[10 20 30]  
 [15 25 35]  
 [20 30 40]  
 [25 35 45]  
 [30 40 50]  
 [35 45 55]]
```