

```
In [1]: import numpy as np
```

```
In [3]: arr = np.array([[2,3,4],[5,6,7],[8,9,0]])
```

```
In [4]: arr
```

```
Out[4]: array([[2, 3, 4],
               [5, 6, 7],
               [8, 9, 0]])
```

```
In [5]: arr.shape
```

```
Out[5]: (1, 3, 3)
```

```
In [6]: arr.size
```

```
Out[6]: 9
```

```
In [7]: arr.ndim
```

```
Out[7]: 3
```

```
In [9]: arr.dtype
```

```
Out[9]: dtype('int32')
```

```
In [10]: arr = np.array([[1,2,3]])
```

```
In [11]: arr
```

```
Out[11]: array([[1, 2, 3]])
```

```
In [12]: arr.shape
```

```
Out[12]: (1, 1, 3)
```

```
In [13]: arr.size
```

```
Out[13]: 3
```

```
In [17]: arr = np.array([1,2,3],[34,56,-87])
```

```
In [18]: arr
```

```
Out[18]: array([[ 1,  2,  3],
               [34, 56, -87]])
```

```
In [19]: arr = np.array([[2,3,4],[5,6,7],[8,9,0]])
```

```
In [20]: arr
```

```
Out[20]: array([[2, 3, 4],
               [5, 6, 7],
               [8, 9, 0]])
```

```
In [23]: arr [0] [0] [1]
```

```
In [30]: arr = np.array([[5,6,7]])
```

```
In [31]: arr
```

```
Out[31]: array([[5, 6, 7]])
```

```
In [32]: arr[0][1]
```

```
Out[32]: 6
```

```
In [33]: arr = np.array([[2,3,4],[5,6,7],[8,9,0]])
```

```
In [34]: arr
```

```
Out[34]: array([[2, 3, 4],
               [5, 6, 7],
               [8, 9, 0]])
```

```
In [36]: arr[0][2][2]
```

```
Out[36]: 0
```

```
In [37]: # sum
```

```
a = arr.sum()
```

```
In [38]: a
```

```
Out[38]: 44
```

```
In [40]: arr.sum(axis = 0)
```

```
Out[40]: array([[2, 3, 4],
               [5, 6, 7],
               [8, 9, 0]])
```

```
In [41]: arr.sum(axis = 1)
```

```
Out[41]: array([[15, 18, 11]])
```

```
In [42]: arr = np.array ([[1,2,3]])
```

```
In [43]: arr.sum(axis = 0)
```

```
Out[43]: array([[1, 2, 3]])
```

```
In [44]: arr.sum(axis = 1)
```

```
Out[44]: array([[1, 2, 3]])
```

```
In [45]: arr = np.array([[56,78,89],[34,98,67],[23,34,54]])
```

```
In [46]: arr
```

```
Out[46]: array([[56, 78, 89],
               [34, 98, 67],
               [23, 34, 54]])
```



```
for i in x:
    for j in y:
        for k in z:
            if i == j and j == k:
                print("common elements",j)
```

```
common elements 23
common elements 45
common elements 78
```

In [ ]: