```
import numpy as np

x=np.zeros(10)

x

array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])

y=np.ones(10)
y

array([1., 1., 1., 1., 1., 1., 1., 1., 1., 1.])

z=np.ones(10)*5
z

array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])

x=np.arange(10,51)

x

array([10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25,
26,
       27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42,
43,
       44, 45, 46, 47, 48, 49, 50])

y=np.arange(10,51,2)
y

array([10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40,
42,
       44, 46, 48, 50])

arr1=np.array([[0,1,2],[3,4,5],[6,7,8]])

arr1

array([[0, 1, 2],
       [3, 4, 5],
       [6, 7, 8]])

ab=np.identity(3)
ab

array([[1., 0., 0.],
       [0., 1., 0.],
       [0., 0., 1.]])

ra= np.random.randint(0, 1,1)

ra
```

```
array([0])

rand= np.random.normal(0,1,25)

rand

array([-1.24891229,  0.77571021, -0.63115031,  0.18018121, -
0.62879909,
       -1.30137514,  0.89403789,  1.30204126,  0.26590273,
0.6088724 ,
        0.5616372 ,  0.47717356, -0.41265801, -1.02153632, -
1.69198179,
       -0.39589677,  0.5694621 ,  0.2740988 , -0.29339688,
0.28021472,
       -0.37361449, -1.36897505,  0.30941411,  0.14920757, -
0.33973068])

arr = np.arange(0.01, 1.01, 0.01)
arr.reshape(10, 10)

array([[0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07, 0.08, 0.09, 0.1 ],
       [0.11, 0.12, 0.13, 0.14, 0.15, 0.16, 0.17, 0.18, 0.19, 0.2 ],
       [0.21, 0.22, 0.23, 0.24, 0.25, 0.26, 0.27, 0.28, 0.29, 0.3 ],
       [0.31, 0.32, 0.33, 0.34, 0.35, 0.36, 0.37, 0.38, 0.39, 0.4 ],
       [0.41, 0.42, 0.43, 0.44, 0.45, 0.46, 0.47, 0.48, 0.49, 0.5 ],
       [0.51, 0.52, 0.53, 0.54, 0.55, 0.56, 0.57, 0.58, 0.59, 0.6 ],
       [0.61, 0.62, 0.63, 0.64, 0.65, 0.66, 0.67, 0.68, 0.69, 0.7 ],
       [0.71, 0.72, 0.73, 0.74, 0.75, 0.76, 0.77, 0.78, 0.79, 0.8 ],
       [0.81, 0.82, 0.83, 0.84, 0.85, 0.86, 0.87, 0.88, 0.89, 0.9 ],
       [0.91, 0.92, 0.93, 0.94, 0.95, 0.96, 0.97, 0.98, 0.99, 1.  ]])

arr = np.arange(0.01, 1.05, 0.05)

arr1=np.linspace(0,1,20)

arr1

array([0.        , 0.05263158, 0.10526316, 0.15789474, 0.21052632,
       0.26315789, 0.31578947, 0.36842105, 0.42105263, 0.47368421,
       0.52631579, 0.57894737, 0.63157895, 0.68421053, 0.73684211,
       0.78947368, 0.84210526, 0.89473684, 0.94736842, 1.        ])

t=np.arange(1,26).reshape(5,5)
t

array([[ 1,  2,  3,  4,  5],
       [ 6,  7,  8,  9, 10],
       [11, 12, 13, 14, 15],
       [16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25]])
```

```
t1=t[2:5,1:5]
t1
```

```
array([[12, 13, 14, 15],
       [17, 18, 19, 20],
       [22, 23, 24, 25]])
```

```
t1=t[3,4]
t1
```

```
20
```

```
t1=t[0:3,1:2]
```

```
t1
```

```
array([[ 2],
       [ 7],
       [12]])
```

```
t1=t[4:,0:]
```

```
t1
```

```
array([[21, 22, 23, 24, 25]])
```

```
t1=t[3:,:]
```

```
t1
```

```
array([[16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25]])
```

```
sum=np.sum(t)
```

```
sum
```

```
325
```

```
sd=np.std(t)
```

```
sd
```

```
7.211102550927978
```

```
column=np.sum(t,axis=0)
column
```

```
array([55, 60, 65, 70, 75])
```