

```

import numpy as np
print(np.zeros(10));

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

print(np.ones(10));

[1. 1. 1. 1. 1. 1. 1. 1. 1. 1.]

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

[5 5 5 5 5 5 5 5 5 5]

print(np.arange(10,51,2))

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

print(np.arange(0,9,1).reshape(3,3))

[[0 1 2]
 [3 4 5]
 [6 7 8]]

print(np.eye(3))

[[1. 0. 0.]
 [0. 1. 0.]
 [0. 0. 1.]]

from numpy import random
print(random.rand())

0.9773991093818442

a= random.normal(loc=1, scale=2, size=(5, 5))
print(a)

[[-1.57669672  3.72373517 -2.44274805  1.24521977  5.50123355]
 [-1.0848909   0.77594322  2.77594297 -2.08614445  2.6634916 ]
 [ 0.30050893 -0.34483122  0.7797972   2.36324815  2.83501707]
 [ 0.83010862  2.76305531  0.28855988 -0.47910089  0.24751534]
 [ 2.63692003  2.11680365 -3.62286941  0.0782087   1.70955106]]

print(np.array(np.arange(0.01,1.01,0.01).reshape(10,10)))

[[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.  ]]

print(np.array(np.linspace(0,1,20).reshape(4,5)))

[[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.        ]]

mat=np.arange(1,26).reshape(5,5)
print(mat)

[[ 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]]

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mat[2:5,1:5]
array([[12, 13, 14, 15],
       [17, 18, 19, 20],
       [22, 23, 24, 25]])

mat[3,4]
20

mat[0:3,1].reshape(3,1)
array([[ 2],
       [ 7],
       [12]])

mat[4::]
array([[21, 22, 23, 24, 25]])

mat[3::]
array([[16, 17, 18, 19, 20],
       [21, 22, 23, 24, 25]])

print(np.sum(mat))
325

print(np.std(mat))
7.211102550927978

print(sum(mat))
[55 60 65 70 75]
```