

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

```
In [2]: a = np.array([1,2,3,4])  
print(a)  
  
[1 2 3 4]
```

```
In [3]: a+2
```

```
Out[3]: array([3, 4, 5, 6])
```

```
In [4]: a-2
```

```
Out[4]: array([-1,  0,  1,  2])
```

```
In [5]: a*2
```

```
Out[5]: array([2, 4, 6, 8])
```

```
In [6]: a/2
```

```
Out[6]: array([0.5, 1. , 1.5, 2. ])
```

```
In [7]: a*a
```

```
Out[7]: array([ 1,  4,  9, 16])
```

```
In [8]: b = np.array([1,0,1,0])  
print(b)  
  
[1 0 1 0]
```

```
In [9]: a + b
```

```
Out[9]: array([2, 2, 4, 4])
```

```
In [10]: # Take the sine()  
np.sin(a)
```

```
Out[10]: array([ 0.84147098,  0.90929743,  0.14112001, -0.7568025 ])
```

```
In [11]: #Linear Algebra
```

```
In [12]: a = np.ones((2,3))  
print(a)  
  
b = np.full((3,2), 2)  
print(b)  
  
[[1.  1.  1.]  
 [1.  1.  1.]  
 [[2 2]  
 [2 2]  
 [2 2]]
```

```
In [13]: np.matmul(a,b)
```

```
Out[13]: array([[6., 6.],  
               [6., 6.]])
```

```
In [14]: # Finding determinant  
c = np.identity(3)  
print(c)  
np.linalg.det(c)
```

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

```
Out[14]: 1.0
```