

5_ndarray_operation_functions

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

operation in array

```
In [ ]: test_array = np.arange(1,11)
        test_array
```

```
In [ ]: test_array.sum(dtype=np.float)
```

```
In [ ]: test_array = np.arange(1,13).reshape(3,4)
        test_array.sum()
```

```
In [ ]: test_array
```

```
In [ ]: test_array.sum(axis=1), test_array.sum(axis=0)
```

```
In [ ]: third_order_tensor = np.array([test_array,test_array,test_array])
        third_order_tensor
```

```
In [ ]: third_order_tensor.sum(axis=2)
```

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

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

```
In [ ]: test_array = np.arange(1,13).reshape(3,4)
        test_array
```

```
In [ ]: test_array.mean(), test_array.mean(axis=0)
```

```
In [ ]: test_array.std(), test_array.std(axis=0)
```

```
In [ ]: np.exp(test_array), np.sqrt(test_array)
```

Concatenate

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

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

In [ ]: a = np.array([[1, 2, 3]])
        b = np.array([[2, 3, 4]])
        np.concatenate( (a,b) ,axis=0)

In [ ]: a = np.array([[1, 2], [3, 4]])
        b = np.array([[5, 6]])

        np.concatenate( (a,b.T) ,axis=1)

In [ ]: a.tolist()

In [ ]:
```