

```
In [13]: import math
```

Functions

```
In [1]: def performOperation(num1, num2, operation):  
        if operation == 'sum':  
            return num1 + num2  
        if operation == 'multiply':  
            return num1 * num2  
  
        performOperation(2, 3, 'sum')
```

Out[1]: 5

```
In [ ]:
```

Named Parameters

```
In [2]: def performOperation(num1, num2, operation='sum'):  
        if operation == 'sum':  
            return num1 + num2  
        if operation == 'multiply':  
            return num1 * num2  
  
        performOperation(2, 3)
```

Out[2]: 5

```
In [7]: def performOperation(num1, num2, operation='sum', message='Default message'):  
        print(message)  
        if operation == 'sum':  
            return num1 + num2  
        if operation == 'multiply':  
            return num1 * num2  
  
        performOperation(2, 3, message='A new message!', operation='multiply')
```

A new message!

Out[7]: 6

*args

```
In [9]: def performOperation(*args):  
        print(args)  
  
performOperation(1,2,3)  
  
(1, 2, 3)
```

```
In [10]: performOperation(1,2,3, operation='sum')
```

```
-----  
TypeError                                Traceback (most recent call last)  
Input In [10], in <module>  
----> 1 performOperation(1,2,3, operation='sum')  
  
TypeError: performOperation() got an unexpected keyword argument 'operation'
```

**kwargs

```
In [12]: def performOperation(*args, **kwargs):  
        print(args)  
        print(kwargs)  
  
performOperation(1,2,3, operation='sum')  
  
(1, 2, 3)  
{'operation': 'sum'}
```

```
In [16]: def performOperation(*args, operation='sum'):  
        if operation == 'sum':  
            return sum(args)  
        if operation == 'multiply':  
            return math.prod(args)  
  
performOperation(1,2,3,6, 7, 8, operation='sum')
```

```
Out[16]: 27
```

```
In [ ]:
```