

# Args of function

August 5, 2017

```
In [2]: def power(x):  
        return x*x
```

```
In [10]: power(25)
```

```
Out[10]: 625
```

```
In [11]: def powerII(x,n):  
        s = 1  
        while n > 0:  
            n = n - 1  
            s = s * x  
        return s
```

```
In [14]: powerII(5,2)
```

```
Out[14]: 25
```

```
In [18]: powerII(5,3)
```

```
Out[18]: 125
```

```
In [19]: powerII(5)
```

---

TypeError

Traceback (most recent call last)

```
<ipython-input-19-cf14844a1d48> in <module>()  
----> 1 powerII(5)
```

TypeError: powerII() missing 1 required positional argument: 'n'

```
In [21]: def powerIII(x,*,n):  
        s = 1  
        while n > 0:  
            n = n - 1  
            s = s * x  
        return s
```

```
In [23]: powerIII(5,2,'2')
```

```
-----  
TypeError                                Traceback (most recent call last)  
  
  <ipython-input-23-01b47fced84a> in <module>()  
----> 1 powerIII(5,2,'2')  
  
TypeError: powerIII() takes 1 positional argument but 3 were given
```

```
In [24]: powerIII(5, n = 2)
```

```
Out[24]: 25
```

```
In [25]: powerIII(5, n = 2,3)
```

```
File "<ipython-input-25-22a9cf651df9>", line 1  
powerIII(5, n = 2,3)  
              ^  
SyntaxError: non-keyword arg after keyword arg
```

```
In [26]: powerIII(5, n = 2, n = 3)
```

```
File "<ipython-input-26-f28a251ab00b>", line 1  
powerIII(5, n = 2, n = 3)  
              ^  
SyntaxError: keyword argument repeated
```

```
In [27]: def powerIIII(x,*,n,x):
```

```
    s = 1  
    while n > 0:  
        n = n - 1  
        s = s * x  
    return s
```

```
File "<ipython-input-27-c3549cb40a28>", line 1  
def powerIIII(x,*,n,x):  
SyntaxError: duplicate argument 'x' in function definition
```

```
In [28]: def powerX(x,*,k,j,n):
         s = 1
         while n > 0:
             n = n - 1
             s = s * x
         return s
```

```
In [29]: powerX(5, n = 2)
```

---

TypeError Traceback (most recent call last)

```
<ipython-input-29-afa97aa5399b> in <module>()
----> 1 powerX(5, n = 2)
```

TypeError: powerX() missing 2 required keyword-only arguments: 'k' and 'j'

```
In [30]: def powerXI(x,*,k = 'tt',j = (2, 3),n):
         s = 1
         while n > 0:
             n = n - 1
             s = s * x
         return s
```

```
In [32]: powerXI(5, n = 2)
```

```
Out[32]: 25
```

```
In [33]: def powerXII(x,y,*,k = 'tt',j = (2, 3),n):
         s = 1
         while n > 0:
             n = n - 1
             s = s * x
         return s
```

```
In [36]: powerXII(5, n = 2)
```

---

TypeError Traceback (most recent call last)

```
<ipython-input-36-ccd6ccca0340> in <module>()
----> 1 powerXII(5, n = 2)
```

TypeError: powerXII() missing 1 required positional argument: 'y'

```
In [40]: def powerXIII(x,y = power(6),*,k = 'tt',j = (2, 3),n):
        s = 1
        while n > 0:
            n = n - 1
            s = s * x
        print('Value of arg `y` is: {}'.format(y))
        return s
```

```
In [41]: powerXIII(5, n = 2)
```

Value of arg `y` is: 36

Out[41]: 25

```
In [40]: def powerXIII(x,y = power(6),*,k = 'tt',j = (2, 3),n):
        s = 1
        while n > 0:
            n = n - 1
            s = s * x
        print('Value of arg `y` is: {}'.format(y))
        return s
```

```
In [50]: def powerXIV(x,y = power(6),*args,k = 'tt',j = (2, 3),n):
        s = 1
        while n > 0:
            n = n - 1
            s = s * x
        print('Value of arg `y` is: {}'.format(y))
        print('Value of args is: {}'.format(*args))
        return s
```

```
In [48]: powerXIV(5, 9, 88, [1,23,4], n = 2)
```

Value of arg `y` is: 9

Value of args is: 88

Out[48]: 25

```
In [52]: def powerXV(x,y = power(6),*args,k = 'tt',j = (2, 3),n):
        s = 1
        while n > 0:
            n = n - 1
            s = s * x
        print('Value of arg `y` is: {}'.format(y))
        print(*args)
        return s
```

```
In [54]: powerXV(5, 9, 88, [1,23,4], n = 2)
```

```
Value of arg `y` is: 9
```

```
88 [1, 23, 4]
```

```
Out[54]: 25
```

```
In [57]: powerXV( x = 3, 9, 88, [1,23,4], n = 2)
```

```
File "<ipython-input-57-a2108e5e7f1b>", line 1
powerXV( x = 3, 9, 88, [1,23,4], n = 2)
          ^
```

```
SyntaxError: non-keyword arg after keyword arg
```

```
In [56]: powerXV(5, y = 9, 88, [1,23,4], n = 2)
```

```
File "<ipython-input-56-777470f79a40>", line 1
powerXV(5, y = 9, 88, [1,23,4], n = 2)
          ^
```

```
SyntaxError: non-keyword arg after keyword arg
```