Asterisks in Python

****************Multiplication Operator***********************

* for multiplication

** for exponentiation

```python
30    print( 8 * 8 )
31
32    print('*********')
33
34    print( 8 ** 2)
```

```
PROBLEMS      OUTPUT      DEBUG CONSOLE

→  ~ /opt/homebrew/bin/python3 /Users
64
*********
64
```

Arguments

*args

```python
43  ∨ def instructors (*names):
44        print(type(names))
45  ∨     for n in names:
46            print(n)
47
48    instructors('Micheal', 'Joseph', 'Robert', 'John', 'Marcus')
49
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL         1: Python

→  ~ /opt/homebrew/bin/python3 /Users/tepe/Desktop/GitHub/VSCODE/PYTHON/051121.py
<class 'tuple'>
Micheal
Joseph
Robert
John
Marcus
```

**kwargs

```python
51  def instructors (**names):
52      print(type(names))
53      for key, value in names.items():
54          print(key, value)
55
56  instructors(Python = 'Micheal', Pythoney = 'Joseph', Git = 'Robert')
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   1: Python

```
→  ~ /opt/homebrew/bin/python3 /Users/tepe/Desktop/GitHub/VSCODE/PYTHON/051121.py
<class 'dict'>
Python Micheal
Pythoney Joseph
Git Robert
```

Unpacking Iterables

- list, tuple, set

```python
33  listem = [1, 2, 3]
34  tuplem = (4, 5, 6)
35  setim = {7, 8, 9}
36  benim = [*listem, *tuplem, *setim]
37
38  print(f'My new list ===> {benim}')
39
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**

```
→  ~ /opt/homebrew/bin/python3 /Users/tepe/Desktop/Git
My new list ===> [1, 2, 3, 4, 5, 6, 8, 9, 7]
```

- Dict,

```
41    mydict = {'a': 8, 'b': 9, 'c': 10}   # upacking dict
42    print(*mydict)
43
44    print('{a} {b} {c}'.format(**mydict))
45
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**   1: Python

```
→  ~ /opt/homebrew/bin/python3 /Users/tepe/Desktop/GitHub/VSCODE/PYTHON/05
a b c
8 9 10
```

Bonus!

```
50    # Bonus!
51
52    listem = [1, 2, 3, 4 , 5, 6, 7, 8]
53    *a, b = listem
54
55    print(a)
56    print(b)
57
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**

```
→  ~ /opt/homebrew/bin/python3 /Users/tepe/Desktop/G
[1, 2, 3, 4, 5, 6, 7]
8
```