

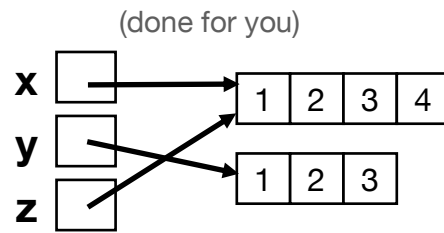
Put True (T) or False (F) in every cell, based on characteristics of each type.

1

Data Type	Mutable?	Pre-installed?	Builtin?	Create New Types?	Named Attributes?
list					
tuple					
namedtuple					

2

```
x = [1, 2, 3]
y = [1, 2, 3]
z = x
z.append(4)
```



(draw)

3

```
nums1 = [1, 2]
nums2 = nums1
x = nums2.pop(1)
```

(draw)

4

```
x = [1, 2]
y = [3]
z = x + y
y.append(4)
```

(draw)

5

```
people = {"alice": 30, "bob": 25}
x = people
y = people["bob"]
x["alice"] = 31
y = 26
```

(draw)

6

```
def f(items):
    return items.pop(0)
nums = [1, 2, 3]
nums.append(f(nums))
```

Remember to import copy for these in Python Tutor! (draw)

7 `x = [2,1]`
`y = copy.copy(y)`
`y.sort()`

(draw)

8 `def biggest(items):`
 `items = copy.copy(items)`
 `items.sort()`
 `return items[-1]`
`nums = [3,9,6]`
`x = biggest(nums)`

(draw)

9 `team1 = [`
 `{"name": "A", "age": 7}`
`]`
`team2 = copy.copy(team1)`
`team2.append(`
 `{"name": "B", "age": 9}`
`)`
`team2[0]["age"] = 8`
`x = team1[0]["age"]`

(draw)

10 Same as above, but with
`copy.deepcopy(...)` instead
of `copy.copy(...)`.

(draw)

11 `orig = [1,[2,[3,4]]]`
`x = orig`
`y = copy.copy(orig)`
`z = copy.deepcopy(orig)`