# Lists & Tuples:
# Practice Exercises

# Lists Practice Exercises

**Exercises:**

**If you have this list, <u>assigned to the variable "test":</u>**

```
[["Jack", "456-342", 56], ("Emily", "231-523", 15), "Nora", [True, False]]
```

**What is the value of each one of these expressions?**
(Try to answer them without running the code. They could also throw errors)

**a)** test[0]

**b)** test[len(test)]

**c)** test[-1]

**d)** test[-3]

**e)** test[0][2]

**f)** test[1][5]

**g)** test[3][0]

**h)** test[1:]

**i)** test[:]

**j)** test[3][-1]

**k)** test[0][0]

**l)** test[1][0] + test[2]

**m)** test[:2]

**n)** test[::2]

**o)** test[::-1]

**p)** test[:-1]

**Answers:**

**If you have this list, <u>assigned to the variable "test"</u>:**

```
[["Jack", "456-342", 56], ("Emily", "231-523", 15), "Nora", [True, False]]
```

**What is the value of each one of these expressions?**
(Try to answer them without running the code. They could also throw errors)

```
>>> test = [["Jack", "456-342", 56], ("Emily", "231-523", 15), "Nora", [True, False]]
>>> test[0]
['Jack', '456-342', 56]
>>> test[len(test)]
Traceback (most recent call last):
  File "<pyshell#2>", line 1, in <module>
    test[len(test)]
IndexError: list index out of range
>>> test[-1]
[True, False]
>>> test[-3]
('Emily', '231-523', 15)
>>> test[0][2]
56
>>> test[1][5]
Traceback (most recent call last):
  File "<pyshell#6>", line 1, in <module>
    test[1][5]
IndexError: tuple index out of range
>>> test[3][0]
True
>>> test[1:]
[('Emily', '231-523', 15), 'Nora', [True, False]]
>>> test[:]
[['Jack', '456-342', 56], ('Emily', '231-523', 15), 'Nora', [True, False]]
>>> test[3][-1]
False
>>> test[0][0]
'Jack'
>>> test[1][0] + test[2]
'EmilyNora'
>>> test[:2]
[['Jack', '456-342', 56], ('Emily', '231-523', 15)]
>>> test[::2]
[['Jack', '456-342', 56], 'Nora']
>>> test[::-1]
[[True, False], 'Nora', ('Emily', '231-523', 15), ['Jack', '456-342', 56]]
>>> test[:-1]
[['Jack', '456-342', 56], ('Emily', '231-523', 15), 'Nora']
>>> |
```

**<u>Answers:</u>**

**If you have this tuple, <u>assigned to the variable "test"</u>:**

```
([("Rose", 45, 5.6), [1, 2, 3]], ("a", "b", "c"), "Puppy", [4, 7, 8])
```

**What is the value of each one of these expressions?**
(Try to answer them without running the code. They could also throw errors)

**a)** test[0][1][2]

**b)** test[0][0]

**c)** test[4]

**d)** test[3][1]

**e)** test[1:]

**f)** test[-1]

**g)** test[::-2]

**h)** test[::2]

**i)** test[2][0]

**j)** test[1][1]

**k)** test[-3]

**l)** test[-3][0]

**m)** test[0][-2]

**n)** test[0][1][3]

**o)** test[0][::-1]

**p)** test[1][1:]

**Answers:**

**If you have this tuple, <u>assigned to the variable "test"</u>:**

```
([("Rose", 45, 5.6), [1, 2, 3]], ("a", "b", "c"), "Puppy", [4, 7, 8])
```

**What is the value of each one of these expressions?**

(Try to answer them without running the code. They could also throw errors)

```
>>> test = ([("Rose", 45, 5.6), [1, 2, 3]], ("a", "b", "c"), "Puppy", [4, 7, 8])
>>> test[0][1][2]
3
>>> test[0][0]
('Rose', 45, 5.6)
>>> test[4]
Traceback (most recent call last):
  File "<pyshell#3>", line 1, in <module>
    test[4]
IndexError: tuple index out of range
>>> test[3][1]
7
>>> test[1:]
(('a', 'b', 'c'), 'Puppy', [4, 7, 8])
>>> test[:-1]
([('Rose', 45, 5.6), [1, 2, 3]], ('a', 'b', 'c'), 'Puppy')
>>> test[::-2]
([4, 7, 8], ('a', 'b', 'c'))
>>> test[::2]
([('Rose', 45, 5.6), [1, 2, 3]], 'Puppy')
>>> test[2][0]
'P'
>>> test[1][1]
'b'
>>> test[-3]
('a', 'b', 'c')
>>> test[-3][0]
'a'
>>> test[0][-2]
('Rose', 45, 5.6)
>>> test[0][1][3]
Traceback (most recent call last):
  File "<pyshell#14>", line 1, in <module>
    test[0][1][3]
IndexError: list index out of range
>>> test[0][::-1]
[[1, 2, 3], ('Rose', 45, 5.6)]
>>> test[1][1:]
('b', 'c')
```