

Quiz – Lists and Tuples - Q1

Which of the following are true of Python lists?

☒ All elements in a list must be of the same type

☐ A given object may appear in a list more than once

☐ A list may contain any type of object except another list

☐ There is no conceptual limit to the size of a list

☐ These represent the same list:

```
['a', 'b', 'c']
```

```
['c', 'a', 'b']
```

Quiz – Lists and Tuples - Q2

Assume the following list definition:

```
Python >>>
>>> a = ['foo', 'bar', 'baz', 'qux', 'quux', 'corge']
```

Several short REPL sessions are shown below. Which display correct output?

☐ Python >>>

```
>>> print(a[-6])
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
IndexError: list index out of range
```

☐ Python >>>

```
>>> max(a[2:4] + ['grault'])
'qux'
```

☐ Python >>>

```
>>> print(a[-5:-3])
['bar', 'baz']
```

☐ Python >>>

```
>>> a[:] is a
True
```

☐ Python >>>

```
>>> print(a[4::-2])
['quux', 'baz', 'foo']
```

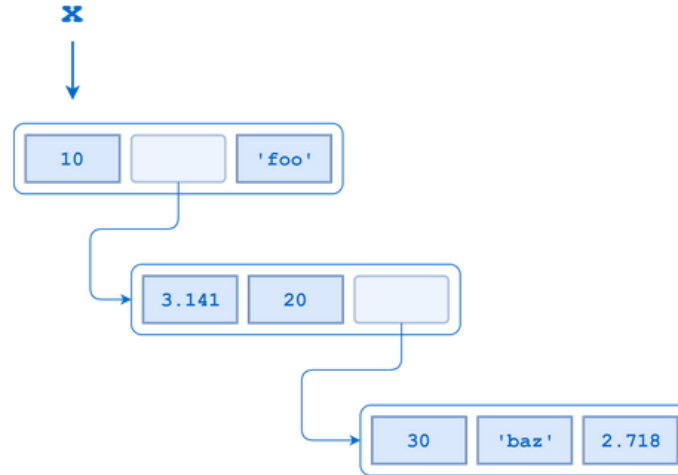
Quiz – Lists and Tuples - Q3

Consider the following nested list definition:

Python

```
x = [10, [3.141, 20, [30, 'baz', 2.718]], 'foo']
```

A schematic for this list is shown below:



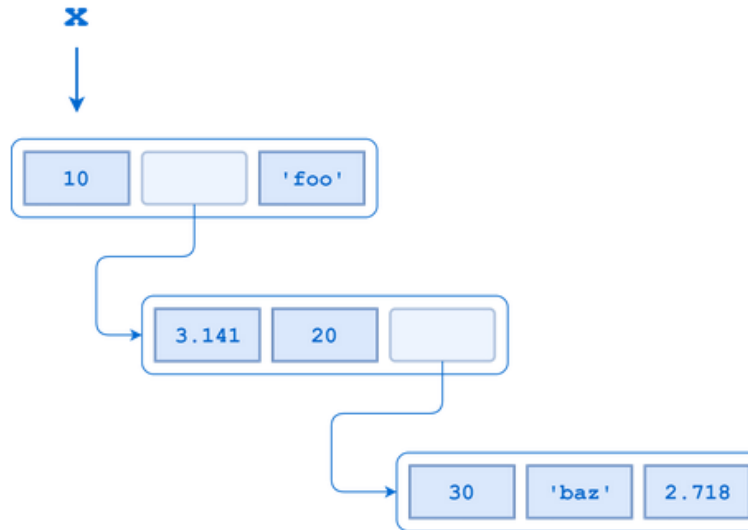
What is the expression that returns the 'z' in 'baz'?

Quiz – Lists and Tuples - Q4

Same nested list as the previous question:

Python

```
x = [10, [3.141, 20, [30, 'baz', 2.718]], 'foo']
```



What expression returns the list `['baz', 2.718]` ?

Quiz – Lists and Tuples - Q5

List `a` is defined as follows:

```
Python
a = [1, 2, 3, 4, 5]
```

Which of the following statements removes the middle element `3` from `a` so that it equals `[1, 2, 4, 5]`?

☐ Python
`a[2:2] = []`

☐ Python
`del a[2]`

☐ Python
`a.remove(3)`

☐ Python
`a[2] = []`

☐ Python
`a[2:3] = []`

Quiz – Lists and Tuples - Q6

List `a` is defined as follows:

Python

```
a = ['a', 'b', 'c']
```

Which of the following statements adds 'd' and 'e' to the end of `a`, so that it then equals `['a', 'b', 'c', 'd', 'e']`:

☐

Python

```
a.extend(['d', 'e'])
```

☐

Python

```
a += 'de'
```

☐

Python

```
a[-1:] = ['d', 'e']
```

☐

Python

```
a += ['d', 'e']
```

☐

Python

```
a.append(['d', 'e'])
```

☐

Python

```
a[len(a):] = ['d', 'e']
```

Quiz – Lists and Tuples - Q7

You have a list `a` defined as follows:

Python

```
a = [1, 2, 7, 8]
```

Write a Python statement using **slice assignment** that will fill in the missing values so that `a` equals `[1, 2, 3, 4, 5, 6, 7, 8]`.

1

 Hint

The slice assignment should begin `a[2:2] = ...`

Quiz – Lists and Tuples - Q8

Suppose you have the following tuple definition:

Python

```
t = ('foo', 'bar', 'baz')
```

Which of the following statements replaces the second element ('bar') with the string 'qux' :

☒

Python

```
t[1] = 'qux'
```

☐

Python

```
t[1:1] = 'qux'
```

☐

It's a trick question—tuples can't be modified.

☐

Python

```
t(1) = 'qux'
```


Quiz – Lists and Tuples - Q9

Write Python code to create a tuple with a single element, the string `'foo'`, and assign it to a variable called `t`.

Quiz – Lists and Tuples - Q10

Consider this assignment statement:

Python

```
a, b, c = (1, 2, 3, 4, 5, 6, 7, 8, 9)[1::3]
```

Following execution of this statement, what is the value of `b`:

☒ 6

☐ 5

☐ 2

☐ 4

Quiz – Lists and Tuples - Q11

Assume `x` and `y` are assigned as follows:

Python

```
x = 5  
y = -5
```

What is the effect of this statement:

Python

```
x, y = (y, x)[::-1]
```

☒ The values of `x` and `y` are unchanged

☐ The values of `x` and `y` are swapped

☐ Both `x` and `y` are `-5`

☐ Both `x` and `y` are `5`