Sequences: Question 1

0/1 point (graded)

Consider the following tuple and index `(1,2,3)[-0]`. What will this return?

`0`

`1`

correct

`3`

This code contains an error.

Sequences: Question 2

0/1 point (graded)

Consider the following tuple and index `(1,2,3)[-0:0]`. What will this return?

`(0)`

`(1)`

`()`

correct

This code contains an error.

Lists: Question 1

1/1 point (graded)

Consider a list `x=[1,2,3]`. Which index corresponds to `2` in `x`?

Enter your numeric answer here.

correct
1

Lists: Question 2

1/1 point (graded)

Consider a list `x=[1,2,3]`. Enter the code below for how you would use the append method to add the number `4` to the end of list `x`.

Enter your code here.

```
x.append(4)
```

Lists: Question 3

1/1 point (graded)

What do list methods such as `reverse` and `sort` return?

They return a new list with reversed or sorted items.

They return nothing because they are in-place methods, meaning they alter the content of the original list.

correct

Tuples: Question 1

1/1 point (graded)

Consider the tuple `x=(1,2,3)`.

How could you add the integer `4` to the end of the tuple?

This is impossible. Tuples are immutable, so they can't be edited after they've been created.

correct

```
x[4] = 4
```

```
x(4) = 4
```

```
x.append(4)
```

Tuples: Question 2

1/1 point (graded)

Consider `x=(1,2,3)`. Use the `count` method to count the number of `3`s in `x`.

Enter your code here.

x.count(3)

uples: Question 3

1/1 point (graded)

Consider again `x=(1,2,3)`. If you wanted the sum of the numbers in `x` using a single function, which command would you use?

```
x.sum()
```

```
sum(x)
```

correct

`sum x`

`sum[x]`

Tuples: Question 4

1/1 point (graded)

Which of the following prints type `tuple`?

`type(2)`

`type((2))`

`type(2,)`

`type((2,))`

correct

CC 1.2.4: Ranges

Ranges: Question 1

1/1 point (graded)

Why might you prefer to use a range over a list?

Ranges take up less memory than lists because they do not hold all the numbers simultaneously.

correct

Ranges are a type of list, and support all list methods as well as some special methods for range objects.

Creating a range is faster than creating a list, but lists require less memory.

CC 1.2.5: Strings

Strings: Question 1

1.34/2.0 points (graded)

Which of the following expressions are valid?

Select ALL that apply.

```
2 + 2
```
Correct

```
"2" + “2"
```
Correct

```
2 + "2"
```

```
2 * 2
```

```
"2" * "2"
```

```
2 * “2"
```

Strings: Question 2

1/1 point (graded)

Which of the following lines of code will fail to return the integers `0` through `9` in a single string?

```
"0"+"1"+"2"+"3"+"4"+"5"+"6"+"7"+"8"+"9"
```

```
"".join([str(i) for i in range(10)])
```

```
str(range(10))
```

correct

`string.digits` (using the `string` library)

Strings: Question 3

1/1 point (graded)

Assume you have assigned `x` the string value of "125,000" (i.e., `x = "125,000"`). Can you find a string method that tests if `x` only contains digits?

Enter your code that tests whether `x` contains only digits.

x.isdigit?

CC 1.2.6: Sets

Sets: Question 1

1/1 point (graded)

Let sets `x={1,2,3}` and `y={2,3,4}`. How could you get `{4}` from `x` and `y` using basic set operations?

Enter your code here.

y.difference(x)

Sets: Question 2

1/1 point (graded)

Consider again sets `x={1,2,3}` and `y={2,3,4}`. How could you get `{2, 3}` from `x` and `y` using basic set operations?

Enter your code here.

x & y

Sets: Question 3

1/1 point (graded)

Consider again sets `x={1,2,3}` and `y={2,3,4}`. How could you get `{1, 4}` from `x` and `y` using the provided set methods?

Enter your code here.

(x ^ y)

Sets: Question 4

1/1 point (graded)

Consider again sets `x={1,2,3}` and `y={2,3,4}`. Which of the following lines of code will determine if all elements of `x` are in `y`?

`x.issubset(y)`

correct

`x.isin(y)`

`x.is_in(y)`

`x in y`

CC 1.2.7: Dictionaries

Dictionaries: Question 1

1/1 point (graded)

Consider the dictionary:

```
age={'Tim':29, 'Jim':31, 'Pam':27, 'Sam':35}
```

`age[0]` returns an error. Why?

For dictionaries, indices begin with `1`.

In this dictionary, no one has age `0`.

`0` is not a valid key to add to a dictionary.

There is no key `0` in the dictionary.

correct

Dictionaries: Question 2

1/1 point (graded)

Why may you not edit the key `"Tim"` to `"Tom"`?

`"Tom"` is not a valid dictionary key.

`"Tom"` is already used as a dictionary key.

Dictionary keys are not mutable.
correct

Dictionaries are not mutable.

Dictionaries: Question 3

1/1 point (graded)

Which of the following data structures may be used as keys in a `dict`?

Select ALL that apply.

Strings
Correct

Lists

Tuples
Correct