CSC108H Winter 2023 Worksheet: List Operations and Methods, Function range

1. Consider this code:

```
a = [1, 0]
```

All of the following code fragments cause `a` to refer to `[1, 0, 8]`.

Circle all of the code fragment(s) that create a new list.

(a) `a.append(8)`   (b) `a = a + [8]`
(c) `a.insert(len(a), 8)`   (d) `a = [a[0], a[1], 8]`

Circle all of the code fragment(s) that modify the original list.

(a) `a.append(8)`   (b) `a = a + [8]`
(c) `a.insert(len(a), 8)`   (d) `a = [a[0], a[1], 8]`

2. Consider this code:

```
a = [1, 0, 8]
b = a.sort()
```

After the code above is executed, which of the following expressions evaluate to `True`? Circle those expression(s).

(a) `a == [1, 0, 8]`   (b) `a == [0, 1, 8]`

(c) `b == [1, 0, 8]`   (d) `b == [0, 1, 8]`

3. Consider this code

```
a = [0, 1, 2]
b = a
b[2] = 100
```

After the code above is executed, which of the following expressions evaluate to `True`? Circle those expression(s).

(a) `a == [0, 1, 2] and b == [0, 1, 100]`   (b) `a == [0, 1, 2] and b == [0, 100, 2]`

(c) `a == [0, 1, 100] and b == [0, 1, 100]`   (d) `id(a) == id(b)`

4. Which of the following code fragments **does not** print `'na'` 12 times? Circle those expression(s).

(a) `for i in range(12):`
    `    print('na')`

(b) `for i in range(1, 24, 2):`
    `    print('na')`

(c) `for i in range(1, 12):`
    `    print('na')`

(d) `for i in range(6, 12):`
    `    print('na')`
    `    print('na')`