

CSCA08H Worksheet: List Operations and Methods, range

1. Consider this code:

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

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

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

- Which of the above create a new list object? **(b) operator + creates a new list**
(d) [...] creates a new list
- Which of the above modify the original list?
(a) method append modifies the list
(c) method insert modifies the list

2. Consider this code:

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

- After the code above is executed, what does variable **a** refer to? **[0, 1, 8]**
- After the code above is executed, what does variable **b** refer to? **None**

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):` **i: 0,1,2,...,11** (b) `for i in range(1, 24, 2):` **i: 1,3,5,...,23**
 `print('na')` `print('na')`
(c) `for i in range(1, 12):` **i: 1,2,3,...,11** (d) `for i in range(6, 12):`
 `print('na')` `print('na')` **i: 6,7,8,...,11**
 `print('na')`