

## CMSC 206: Data Structures Reading Javadoc Documentation

Using the documentation as posted at <https://docs.oracle.com/javase/8/docs/api/>, answer the following questions.

1. Consider the method `ArrayList.indexOf`. Also, let's say we have a `list` as created by these statements:

```
ArrayList<String> list = new ArrayList<>();  
list.add("hi");  
list.add("there");  
list.add(null);  
list.add("baloney");  
list.add("hi");
```

- a. What type does the `indexOf` method return?
  - b. What would `list.indexOf("hi")` return?
  - c. Which of the following is well-typed? There might be more than one.
    1. `ArrayList.indexOf("hi")`
    2. `list.indexOf("hi")`
    3. `indexOf("hi")`
    4. `list.indexOf()`
    5. `ArrayList.indexOf()`
    6. `list.indexOf(new ArrayList<Integer>())`
    7. `ArrayList.indexOf("hi", "there")`
    8. `indexOf("hi", "there")`
    9. `list.indexOf("hi", "there")`
  - d. What would `list.indexOf(null)` return?
  - e. What would `null.indexOf(list)` return?
2. Now, consider two-parameter `ArrayList.add`, with the same setup (`list`) as above.
    - a. What type does the two-parameter `add` method return?
    - b. What would be the contents of the list after `list.add(2, "friend");` is executed?
    - c. Ignoring any change from (b), what would happen if you call `list.add(4, "folks");`? What about `list.add(5, "folks");`? What about `list.add(0, "folks");`?