

ArrayList Homework  
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AP Computer Science A

1. Trace through the following code and determine the state of the ArrayList after the last line. Also, report any error conditions that are encountered

```
ArrayList<String> shoppingCart = new ArrayList<String>();  
String box = "Wheaties";  
shoppingCart.add(box);  
shoppingCart.add("bananas");  
shoppingCart.add("crackers");  
String jar = "Ragu";  
shoppingCart.set(1, jar);  
String snack = "Fritos";  
shoppingCart.add(2, snack);  
shoppingCart.remove(0);  
String dairy = "milk";  
shoppingCart.set(1, dairy);
```

2) For this ArrayList, which of the following lines of code would cause an error?

```
ArrayList<String> list = new ArrayList<String>();  
list.add("a");  
list.add("b");  
list.add("c");
```

- |                      |                      |                      |                      |
|----------------------|----------------------|----------------------|----------------------|
| a) list.add(-1, "d") | b) list.add(0, "d"); | c) list.add(2, "d"); | d) list.add(3, "d"); |
| e) list.set(-1, "d") | f) list.set(0, "d"); | g) list.set(2, "d"); | h) list.set(3, "d"); |
| i) list.remove(-1)   | j) list.remove(0);   | k) list.remove(2);   | l) list.remove(3);   |

3) TRICKY - the code below attempts to remove all the a's, but only succeeds to remove the first... why?

```
ArrayList<String> list = new ArrayList<String>();  
list.add("a");  
list.add("a");  
list.add("b");
```

```
for(int i = 0; i < list.size(); i++)  
    if(list.get(i).equals("a"))  
        list.remove(i);
```