CSE 341 — Pizza Discussion Questions

1. Consider the following Java code fragments. (The first 3 lines are the same for all of them; it's just the last line that is different.) In each case, does the code compile correctly? If so, does it execute without error, or is there an exception?

```
Point[] a = new Point[10];
Object[] b;
b = a;
b[0] = new Point(10,20);


Point[] a = new Point[10];
Object[] b;
b = a;
b[0] = "hi there";


Point[] a = new Point[10];
Object[] b;
b = a;
a[0] = "hi there";
```

2. Following the example of the class `TwoTypes` in the lecture notes, define a class `Triple`, parameterized by three types A, B, and C. Give example code that uses `Triple` to hold an int and two strings.

3. Joe Mocha is defining an interface `Appendable` in Pizza that includes an `append` method. He then defines two classes, `MyString` and `MyList`, which both implement `Appendable`. He wants Pizza's type system to allow a `MyString` to be appended to a `MyString`, and a `MyList` to be appended to a `MyList`, but not a `MyString` to a `MyList`, or a `MyList` to a `MyString`.

   Here is his definition of `Appendable`:

```
interface Appendable {
  Appendable append(Appendable a);
}
```

   What is wrong with this definition? What is a correct one?

   Also write a definition for a class `MyString` that uses the revised definition of `Appendable`. (Just put ... in the body of the method — we only care about the header.)