

1. `foo() || bar()` and `foo() && bar`

- a. `return a ? true: b;`
- b. `return a ? b:false;`

2. Here are the different versions:

- a. without Boolean

```
while(true) {  
    line = read_line();  
    if(all_blanks(line)) break;  
    consume_line();  
}
```

b. with Boolean flag

```
boolean bool = true;  
while(bool) {  
    line = read_line();  
    if(all_blanks(line)) bool = false;  
    consume_line();  
}
```

The one without the boolean flag will be exactly the same as the version provided.

The one with the boolean flag will consume the blank line.

3. Garbage Collection

- a. Most languages that have garbage collection with the exception of a few functional languages are not really considered to be efficient. When memory efficiency matters this kind of function or method is available for use. For example in C the `free()` function frees up memory that the programmer doesn't think he/she needs. In a language with a garbage collector and a `delete` method it would be difficult for a programming team to determine if their objects were still around.
- b. "tenure" of object is a bad idea, because it would lead to large memory leaks in a program. Typically a garbage collector does not error on the side of deleting an object too soon.

4. How are arguments passed to subroutines in your pet language? If there is more than one option, how does the system determine which one to use?

In Coffeescript arguments are passed by reference:

```
test = (a) -> a+3
```

```
a = 3  
alert(a)  
test(a)  
alert(a)
```

The following code will print "3" twice. Letting us know that args are not passed by value.

5. Here is java code to determine which parameter is called first

```
class Order{

    public static void main(String[] Args){
        order(a(),b(),c(),d());
    }

    public static void order(boolean a,boolean b,boolean
c,boolean d){
        System.out.println("Done!");
    }

    public static boolean a(){
        System.out.println("A");
        return true;
    }

    public static boolean b(){
        System.out.println("B");
        return true;
    }

    public static boolean c(){
        System.out.println("C");
        return true;
    }

    public static boolean d(){
        System.out.println("D");
        return true;
    }

}
```

This code will return the following

```
A
B
C
D
Done!
```

So Java must evaluate expressions in the order which they are given as parameters.

Here is coffeescript code to determine how parameters are evaluated.

```
order = (a,b,c,d) -> alert "Done!"
```

```
a = alert "a"
```

```
b = alert "b"
```

```
c = alert "c"
```

```
d = alert "d"
```

This program alerted me in the following order..... a,b,c,d.