Javascript Scope Exercises

1. Determine what this Javascript code will print out (without running it):

```
x = 1;
var a = 5;
var b = 10;
var c = function(a, b, c) {
                    var x = 10;
                    document.write(x);
                    document.write(a);
                    var f = function(a, b, c) {
                                        b = a;
                                        document.write(b);
                                        b = c;
                                        var x = 5;
                                    }
                    f(a,b,c);
                    document.write(b);
                }
c(8,9,10);
document.write(b);
document.write(x);
}
```

2. What is the difference between a method and function?

3. What does 'this' refer to when used in a Java method?

4. What does 'this' refer to when used in a JavaScript method?

5. What does 'this' refer to when used in a JavaScript constructor function?

6. Assume object *x* is the prototype for object *y* in Javascript. Object *x* has a method *f*( ) containing keyword 'this'. When *f* is called by *x.f*( ), what does 'this' refer to?

7. What is a free variable in JavaScript?

8. Create an object that has properties with name = "fred" and major="music" and a property that is a function that takes 2 numbers and returns the smallest of the two, or the square of the two if they are equal.

9. Write Javascript code for creating three *Employee* objects using the "new" keyword and a constructor function. *Employee* objects have the following fields: name, salary, position.

10. Write a Javascript function that takes any number of input arguments and returns the product of the arguments.

11. Write an arrow function that returns the maximum of its three input arguments.