Lecture 13 Worksheet

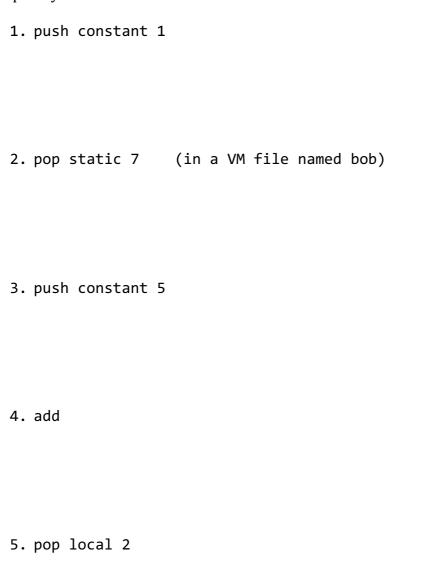
Question 1

How would you implement the following function in the Hack Virtual Machine language?

```
function int iterativefib(int x)
                                           function iterative fib 3
{
       var int fib,fm1,fm2;
                                            // initialise the local variables
       let fib = 1;
       let fm1 = 1;
       let fm2 = 1;
                                           // your loop
       while (x > 1)
             let fib = fm1 + fm2;
             let fm2 = fm1;
             let fm1 = fib;
             let x = x - 1;
       }
                                            // put result on the stack
       return fib;
                                            push local 0
}
                                            return
```

Question 2

How would you implement the following Hack Virtual Machine language operations in Hack assembly language? You may use R13, R14 and R15 as temporary variables.



6. eq