PS 2: Problems 0, 1, and 2

Problem 0: Reading and response

Put your response to the reading below.

I think the most interesting point that I will not forget is Waston's ability to consider a question. It not only stores a lot of information, but also can think like a human being. Waston could keep considering its opinions and trying to balance each of them in order to find the most suitable answer. However, it sometimes cannot answer an extremely simple answer, which is impossible for a wise human, and that is a huge difference between humans and robots. Thus, I believe this high technology will finally contribute to medicine, especially for surgeries. They can replace some dangerous and dull works.

Problem 1: Tracing function calls

global variables

a	b
7	3
16	3

bar's local variables

a	b
	7
14	7
	3
6	3
	5
10	5

foo's local variables

a	b	c
3	7	
3	7	6
3	16	6

output (the lines printed by the program)

```
7 3
bar: 14 7
7 3
bar: 6 3
bar: 10 5
16 3
```

Problem 2: Thinking recursively

2-1)

```
mystery(3, 7)
-------------
    a = 3
    b = 7
    myst_rest = mystery(2,5) = 3
    return 7 + 3=10

    mystery(2, 5)
    ---------------
       a=2
       b=5
       my_rest=mystery(1,3)=3
       return 5+3=8

       mystery(1, 3)
       -----------------
        a = 1
        b = 3
        myst_rest = mystery(0, 1) = 0
        return 3+0=3

            mystery(0,1)
            ---------------
                 a=0
                 b=1
                return 0
```

2-2) 15

2-3) 4

2-4) mystery(-1,1) because a-1 and b-2 will never be zero. Thus, we cannot satisfy the if statement, which is a * b ==0