

## CSE 305 Spring 2015

### Assignment #3: Recursion, Scope Rules, and Binding Time

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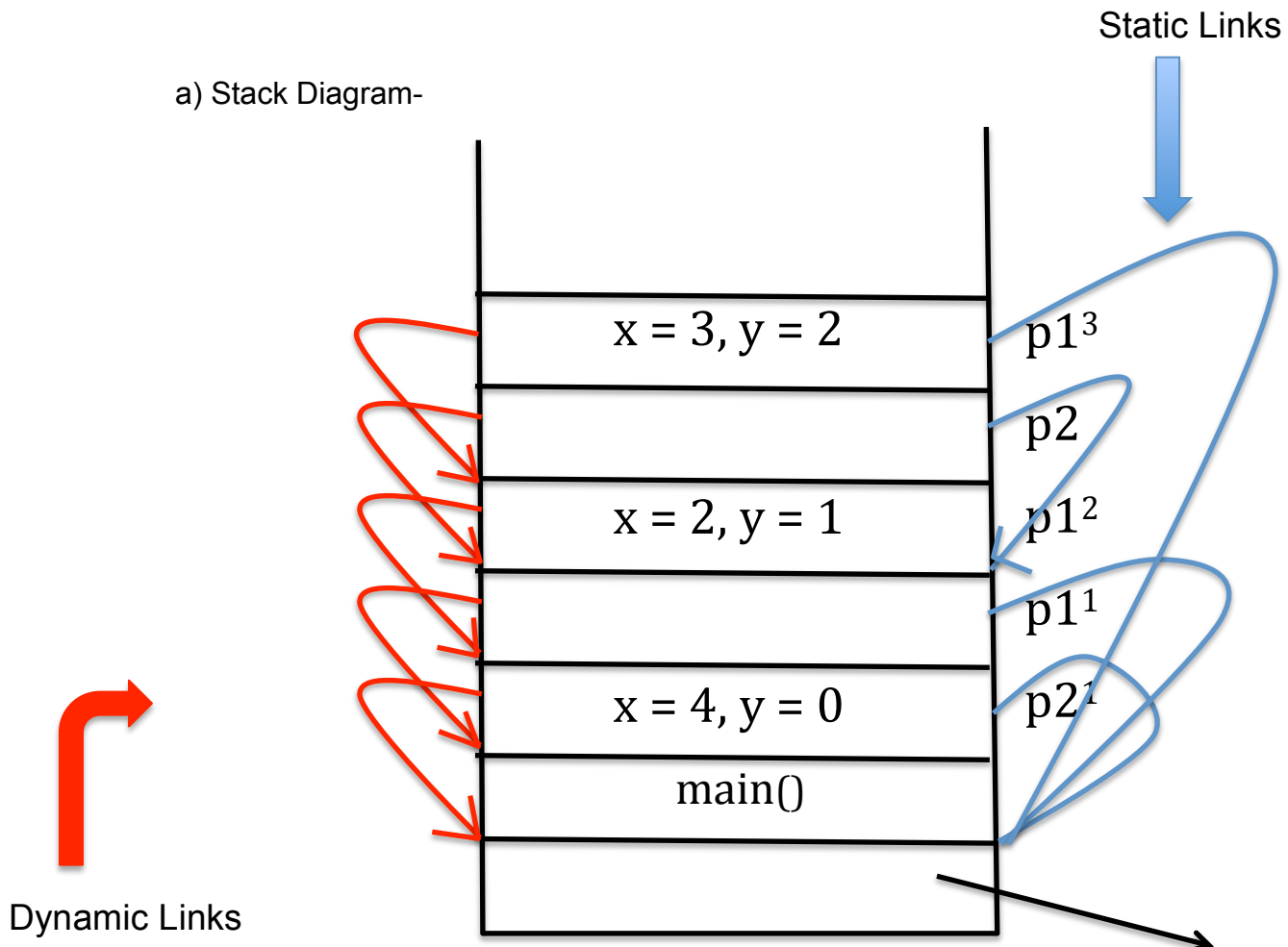
Answer 1 –

```
int fibo(){  
    static int a = 0;  
    static int b = 1;  
    b = a + b;  
    a = b - a;  
    return a;  
}
```

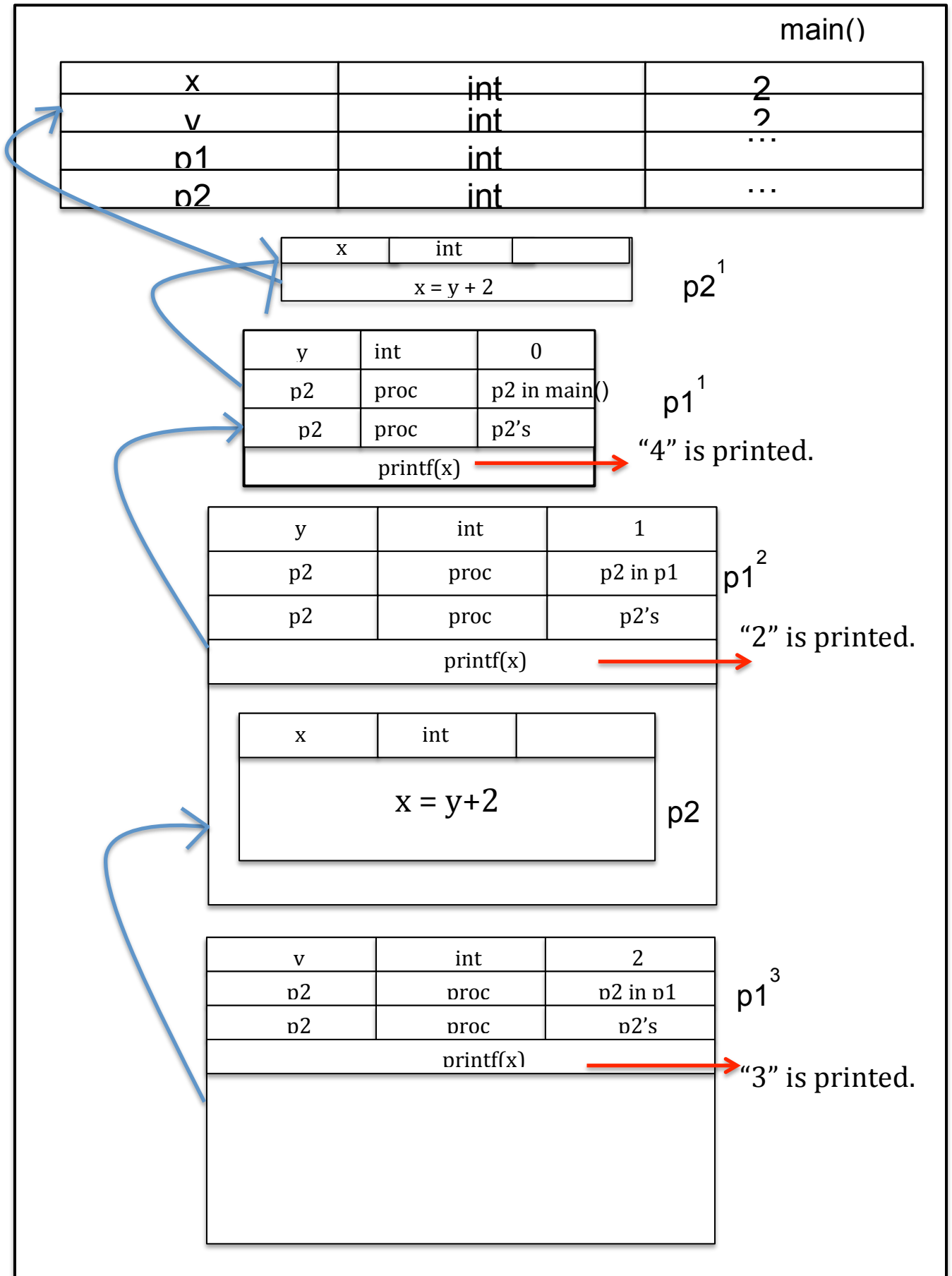
Answer 2 – 1) Output Printed -> 3 2 4

Following are the Scope and Stack Diagrams of Question 2 –

a) Stack Diagram-



b)-



Answer -3.a)-

i) For enqueue(tlist,tr) -  $n = 9$

Iteration number	Number of cons cells allocated
1	2
2	2
3	2
4	0
5	0
6	0
7	2
8	0
9	0

ii) For append(tlist,tr) –  $n = 9$

Iteration number	Number of cons cells allocated
1	3
2	5
3	7
4	0
5	0
6	0
7	3
8	0
9	0

Answer -3.b) –

1. Number of Garbage cells for enqueue(tlist,tr) -> 9
2. Number of Garbage cells for append(tlist,tr)-> 19