6.081 Spring 2018  Miniquiz #11  5 Minutes

```javascript
var x = 0
var y = 1
{
    var x = 2
}

x = x + 1
{
    var y = x + 3
    {
        y = 2
        var x = 5
        //BREAK
        y = y + 6
    }
    x = 2
}
```

Let \( \gamma \) be the stack of frames for this program, each frame denoted by \( \sigma^{(i)} \) (\( \sigma \) for the outer most frame, \( \sigma' \) for a nested frame, \( \sigma'' \) for a doubly nested frame, etc.), each address denoted by \( a_i \) (starting at \( a_0, a_1, a_2, \) etc.), and \( h \) be the heap. At the line denoted by break, what are the values of the following:

1. \( h \) - \{ \( a_0 : 0, a_1 : 1, a_2 : 2, a_3 : 1, a_4 : 4, a_5 : 2, a_6 : 5 \) \}

2. \( \sigma \) - \{ \( x : a_3, y : a_1 \) \}

3. \( \sigma' \) - \{ \( y : a_5 \) \}

4. \( \sigma'' \) - \{ \( x : a_6 \) \}

5. \( \sigma''' \) - N/A