Assignment SU2

Write the Tau-notation for the following code:

1. if(x>y++)
2. if(age==18)
3. return --weight;
4. if(age+10==50)
5. a=b[--c];
6. if(x>=y[z])
7. if(x*=z<60)
8. if(x[i]>z[c])
9. x=getY(a[1]);
10. sum=x[2]+z[0];
11. value = A + getVal(C);

12. Now analyse questions 1 to 6 again using the simplified method.
    a. if(x>y++)
    b. if(age==18)
    c. return --weight;
    d. if(age+10==50)
    e. a=b[--c];
    f. if(x>=y[z])

Use the simplified model to analyse the following program segments. Remember to write your answers in the simplest form.

13. for(int i = 0;i <= n; ++i)
14. for(int i = 0;I <= n+1; ++i)

(Questions 15 and 16 follow on the next page)

15. Study the code below. Write down the correct simplified analysis of lines 6a, 6b, 6c and 8a, 8b and 8c.

```
1    public class Assignment
2    {
3       public static int numbers (int n)
4       {
5       int value = 1;
6       for (int i=1;  i<=n;  i++ )
7         {
8             for ( int j=0;  j<=i+1; ++j)
9               value +=i;
10          }
11        return value;
12     }
13    }
```

16. Again, study the code in question 15. Write down the asymptotic analysis of lines 6a, 6b, 6c and 8a, 8b and 8c.