

12. The running time of this program is (10pts)

```
for (int i = 0; i < 60; i++) {  
    for (int j = i-1; j < N; j++) {  
        for (int k = 0; k < N; k++) {  
            System.out.println(i*j);  
            System.out.println(i);  
        }  
    }  
}
```

- (a)  $O(\log N)$
- (b)  $O(N)$
- (c)  $O(N \log N)$
- (d)  $O(N^2)$
- (e)  $O(N^3)$
- (f)  $O(1)$