

⑧ - the first for-loop: $1 + 1 + 1000 * 2$.

The second for-loop: $1 + 1 + 2000 * 2$.

The if-statement: 4 operations.

$$\Rightarrow T(n) = 1 + 1 + 1000(2 + 1 + 1 + 2000 * (2 + 4)).$$

$$= 2 + 1000(16004) = 2 + 16004000$$

$$\Rightarrow \boxed{T(n) = 16004002}$$

$$\Rightarrow \boxed{O(T(n)) = O(1)}$$

Page 5
