题目：

Given a positive integer *n*, find the least number of perfect square numbers (for example, `1, 4, 9, 16, ...`) which sum to *n*.

For example, given *n* = `12`, return `3` because `12 = 4 + 4 + 4`; given *n* = `13`, return `2` because `13 = 4 + 9`.

1.时间：O（NLOGN）；空间：O（N）

```
class Solution {
    /* dp[i] = min(dp[i-j*j]), 1<= j*j <= i */
public:
    int numSquares(int n) {
        if (n <= 0) return 0;
        std::vector<int> dp(n + 1, 0);
        for (int i = 1; i <= n; ++i){
            int min = std::numeric_limits<int>::max();
            for (int k = 1; k * k <= i; ++k){
                min = std::min(min, dp[i - k * k] + 1);
            }
            dp[i] = min;
        }
        return dp[n];
    }
};
```