題目敘述：

Given a string `s` which represents an expression, *evaluate this expression and return its value*.

The integer division should truncate toward zero.

You may assume that the given expression is always valid. All intermediate results will be in the range of $[-2^{31}, 2^{31} - 1]$.

Note: You are not allowed to use any built-in function which evaluates strings as mathematical expressions, such as `eval()`.

Example 1:

```
Input: s = "3+2*2"
Output: 7
```

Example 2:

```
Input: s = " 3/2 "
Output: 1
```

Example 3:

```
Input: s = " 3+5 / 2 "
Output: 5
```

參考答案

```cpp
class Solution {
public:
    int calculate(string s) {
        int ans = 0, num = 0;
        char op = '+';
```

```cpp
        stack<int> st;
        const int n = s.length();

        for (int i = 0; i < n; ++i) {
            char c = s[i];
            if (isdigit(c)) num = num * 10 + (c - '0');
            if ((!isdigit(c) and c ≠ ' ') or i == n - 1) {
                if (op == '/') {
                    int now = st.top(); st.pop();
                    st.push(now / num);
                }else if (op == '*') {
                    int now = st.top(); st.pop();
                    st.push(now * num);
                }else if (op == '+') st.push(num);
                else st.push(-num);
                op = c, num = 0;
            }
        }

        while (!st.empty()) {
            ans += st.top();
            st.pop();
        }
        return ans;
    }
};
```