

```

function apply_operation(int a, int b, char operator)
    if operator is '+' then
        return a + b
    if operator is '-' then
        return a - b
    if operator is '*' then
        return a * b
    if operator is '/' then
        return a / b

function evaluate(char[] expression)
    value_stack = init_stack()
    ops_stack = init_stack()
    i ← 0
    while i < expression.length() do
        curr ← expression[i]
        if curr is digit then
            value_stack.push(expression[i])

        else if curr is '(' then
            ops_stack.push(expression[i])

        else if curr is ')' then
            if value_stack has less than 2 values or top of ops_stack is '(' then
                return "NotWellFormed"
            while ops_stack is non-empty and top of ops_stack is not '(' do
                v2 ← value_stack.pop()
                v1 ← value_stack.pop()
                operator = ops_stack.pop()
                result = apply_operation(v1, v2, operator)
                value_stack.push(result)
            if top of ops_stack is not '(' then
                return "NotWellFormed"
            else
                ops_stack.pop()

        else if curr is '+' or '-' or '*' or '/' then
            if ops_stack is empty then
                return "NotWellFormed"
            while ops_stack is non-empty and value_stack has 2 or more values and top of
ops_stack has higher or equal precedence than curr, do
                v2 ← value_stack.pop()
                v1 ← value_stack.pop()
                operator = ops_stack.pop()
                result = apply_operation(v1, v2, operator)
                value_stack.push(result)
            ops_stack.push(curr)

        else
            return "NotWellFormed"

        i ← i + 1

    if only one of ops_stack and value_stack is empty do
        return "NotWellFormed"

    while ops_stack is non-empty do
        v2 ← value_stack.pop()
        v1 ← value_stack.pop()
        operator = ops_stack.pop()
        result = apply_operation(v1, v2, operator)
        value_stack.push(result)

    return value_stack.pop()

```