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Algorithm Potion-Adding-Order(v)
    n = v.length
    let m[1...n, 1...n], f[1...n, 1...n], and s[1...n − 1, 2...n] be new tables
    for i = 1 to n
        m[i, i] = 0
        f[i, i] = v[i]
        for j = i + 1 to n
            f[i, j] = f[i, j − 1] + v[j] mod 50
        end
    end
    for l = 2 to n
        for i = 1 to n − l + 1
            j = i + l − 1
            m[i, j] = ∞
            for k = i to j − 1
                q = m[i, k] + m[k + 1, j] + f[i, k] × f[k + 1, j]
                if q < m[i, j]
                    m[i, j] = q
                    s[i, j] = k
                end
            end
        end
    end
    return m and s

Print-Optimal-Parenthesis(s, i, j)
    if i==j
        print v[i]
    else
        print "("
        Print-Optimal-Parenthesis(s, i, s[i, j])
        Print-Optimal-Parenthesis(s, s[i, j] + 1, j)
        print ")"
    end
```