

1021. Remove Outermost Parentheses

Description

A valid parentheses string is either empty `""`, `"(" + A + ")"`, or `A + B`, where `A` and `B` are valid parentheses strings, and `+` represents string concatenation.

- For example, `""`, `"()"`, `"(())"`, and `"(()())"` are all valid parentheses strings.

A valid parentheses string `s` is primitive if it is nonempty, and there does not exist a way to split it into `s = A + B`, with `A` and `B` nonempty valid parentheses strings.

Given a valid parentheses string `s`, consider its primitive decomposition: `s = P1 + P2 + ... + Pk`, where `Pi` are primitive valid parentheses strings.

Return `s` *after removing the outermost parentheses of every primitive string in the primitive decomposition of `s`*.

Example 1:

Input: `s = "(()())(())"`
Output: `"()()()"`
Explanation:
The input string is `"(()())(())"`, with primitive decomposition `"(()())" + "()()"`.
After removing outer parentheses of each part, this is `"()()" + "()" = "()()()"`.

Example 2:

Input: `s = "(()())(()(()))"`
Output: `"()()()()()"`
Explanation:
The input string is `"(()())(()(()))"`, with primitive decomposition `"(()())" + "(())" + "(()())"`.
After removing outer parentheses of each part, this is `"()()" + "()" + "()()" = "()()()()()"`.

Example 3:

Input: `s = "()()"`
Output: `""`
Explanation:
The input string is `"()()"`, with primitive decomposition `"()" + "()"`.
After removing outer parentheses of each part, this is `"" + "" = ""`.

Constraints:

- `1 <= s.length <= 105`
- `s[i]` is either `'('` or `')'`.
- `s` is a valid parentheses string.

