

Valid parentheses (examples)

- Input: `s = " () "`
 - Output: True
- Input: `s = " () {} [] "`
 - Output: True
- Input: `s = " {] "`
 - Output: False
- Input: `s = " ([]) "`
 - Output: True

Valid parentheses (solution)

```
def validParentheses(s):
    stack = []
    open = '(['
    closed = ')]}'
    for c in s:
        if c in open:
            stack.append(c)
        elif c in closed:
            if not stack:
                return False
            if open.find(stack[-1]) == closed.find(c):
                stack.pop()
            else:
                return False
        else:
            return False
    return not stack
```

- Runtime: $O(n)$
- Space: $O(n)$

"New" data structure: stack.

Basically just another way of using a dynamically extendable list, like Python's default list, with $O(1)$ append/pop operations.