STAGE

Qualification Test - Backend

End Stage

Questions

1. Spiral Rhombus Pattern ()
2. Happy Trees ()
3. ()
4. ()

Previous Question

Note:

- You can do multiple submissions.
- Your highest score will be considered

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Happy Trees

You're given a balanced bracket expression. In the forest representati number of trees which are happy. A happy tree is a tree in which ever than the leaves has the same number of children. A tree with just one also be considered happy.

Input Format

First line of input consists of an integer `t` denoting the number of tes of each test case consists of an integer `n` denoting the length of the Second line consists of the bracket expression.

Output Format

For each test case, find the number of trees which are happy.

Constraints

1 <= t <= 1000

n = 2 * m where 1 <= m <= 1000

Sample Input

```
4
12
[[[][]][[]]]
20
[[[][]][][][][]]]
14
[[]][[][[]]][]
28
[[[]]][[]][]]][[][]][[[[]]]]
```

Sample Output

```
0
1
2
3
```

Explanation

The expression `[[[]][[]]]` has the following representation

```
[]
├── []
│   ├── []
│   └── []
└── []
    └── []
```

There is only one tree. Root and second child of root has two children of root has only one child. It's not happy.

The expression `[[[]][]][[]][[]]]` has the following representatio

```
[]
├── []
│   ├── []
│   ├── []
│   └── []
├── []
└── []
    ├── []
    ├── []
    └── []
```

There is only one tree. All non-leaf vertices have exactly 3 children. Tr

The expression `[[]][[]][[]]][]` has the following representation

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```
[]
├── []
└── []
    └── []
[]
```

There are three trees. Only two of them are happy.

The expression `[[[][]][[]]][[][]][[[]]]` has the following repre

```
[]
├── []
│   ├── []
│   └── []
└── []
    ├── []
    └── []
[]
├── []
└── []
[]
└── []
    └── []
        └── []
```

The number of happy trees is 3.

Environment

Read from STDIN and write to STDOUT.

Please check the sample programs below which print the sum of two received as input

- **Bash** goo.gl/bMZzAh (https://goo.gl/bMZzAh)
- **C** goo.gl/4zRfEC (https://goo.gl/4zRfEC)
- **C#** goo.gl/X1Svfp (https://goo.gl/X1Svfp) (Mono JIT Compiler)
- **C++** bit.ly/2Io1VND (https://bit.ly/2Io1VND)
- **Clojure** goo.gl/teZHzL (https://goo.gl/teZHzL)
- **Go** goo.gl/hWHToi (https://goo.gl/hWHToi)
- **Java** bit.ly/3dc9uDT (https://bit.ly/3dc9uDT) (Remove package and keep the main class (class containing the main method) na (small case))
- **JavaScript** goo.gl/L3jxM6 (https://goo.gl/L3jxM6)
- **Kotlin** goo.gl/qTMk6v (https://goo.gl/qTMk6v)
- **PHP** goo.gl/p26tnC (https://goo.gl/p26tnC)
- **Python2** bit.ly/2T1TGu4 (https://bit.ly/2T1TGu4)
- **Python3** bit.ly/2AsphPm (https://bit.ly/2AsphPm)
- **Ruby** goo.gl/PhpUyX (https://goo.gl/PhpUyX)
- **Rust** bit.ly/2I9onK8 (https://bit.ly/2I9onK8)
- **Scala** bit.ly/2KsaNAH (https://bit.ly/2KsaNAH)
- **Swift** goo.gl/fX3kdj (https://goo.gl/fX3kdj)
- **Perl** bit.ly/3k9ar2n (https://bit.ly/3k9ar2n)
- **Erlang** bit.ly/35Uaqtb (https://bit.ly/35Uaqtb)

Instructions

- Read from Standard Input Stream (stdin) and write to Standarc (stdout) unless specified otherwise.
- The dashboard provides two modes.
  - Test runs your code against public/sample test cases.
  - Submit runs against private/hidden ones.
- Only public/sample test cases and their elaborate "test" results available. A line by line comparison with expected output is sho score for passing the public test cases. It's only for testing and
- For the private/hidden test cases, the judging system only shov passed status, time consumption, memory consumption and sc a "submit" will yield a score. Total score is a normalized weighte test cases.
- If the code reaches execution time limit and it still running, it is t timeout is declared.
- Use the help button in case you require any help.

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36	62b5-411d-93e6-445131c7efbb/in t)	0 1 56b9-4609-8acf
12		1
[[[][]][[]]]		2
20		3
[[[][][]][][][][]]		3
14		0
[[]][[][[]]][]		2

Change file Java 8

```
1
```