

5625. Count of Matches in Tournament

[My Submissions \(/contest/weekly-contest-219/problems/count-of-matches-in-tournament/submissions/\)](#) [Back to Contest \(/contest/weekly-contest-219/\)](#)

You are given an integer n , the number of teams in a tournament that has strange rules:

- If the current number of teams is **even**, each team gets paired with another team. A total of $n / 2$ matches are played, and $n / 2$ teams advance to the next round.
- If the current number of teams is **odd**, one team randomly advances in the tournament, and the rest gets paired. A total of $(n - 1) / 2$ matches are played, and $(n - 1) / 2 + 1$ teams advance to the next round.

Return the number of matches played in the tournament until a winner is decided.

User Accepted:	0
User Tried:	0
Total Accepted:	0
Total Submissions:	0
Difficulty:	Easy

Example 1:

Input: $n = 7$
Output: 6
Explanation: Details of the tournament:
- 1st Round: Teams = 7, Matches = 3, and 4 teams advance.
- 2nd Round: Teams = 4, Matches = 2, and 2 teams advance.
- 3rd Round: Teams = 2, Matches = 1, and 1 team is declared the winner.
Total number of matches = 3 + 2 + 1 = 6.

Example 2:

Input: $n = 14$
Output: 13
Explanation: Details of the tournament:
- 1st Round: Teams = 14, Matches = 7, and 7 teams advance.
- 2nd Round: Teams = 7, Matches = 3, and 4 teams advance.
- 3rd Round: Teams = 4, Matches = 2, and 2 teams advance.
- 4th Round: Teams = 2, Matches = 1, and 1 team is declared the winner.
Total number of matches = 7 + 3 + 2 + 1 = 13.

Constraints:

- $1 \leq n \leq 200$

JavaScript

```
1 /**
2  * @param {number} n
3  * @return {number}
4  */
5 const numberOfMatches = (n) => {
6     let m = 0;
7     while (n > 1) {
8         if (n % 2 == 0) {
9             m += n / 2;
10            n /= 2;
11        } else {
12            m += (n - 1) / 2;
13            n = (n - 1) / 2 + 1;
14        }
15    }
16    return m;
17 };
```

☐ Custom Testcase [Use Example testcases](#)

[Run](#) [Submit](#)

Submission Result: **Accepted** (/submissions/detail/430054045/) ⓘ [More Details > \(/submissions/detail/430054045/\)](#)

Share your acceptance!