

# Problem 1904: The Number of Full Rounds You Have Played

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 43.41%

**Paid Only:** No

**Tags:** Math, String

## Problem Description

You are participating in an online chess tournament. There is a chess round that starts every `15` minutes. The first round of the day starts at `00:00`, and after every `15` minutes, a new round starts.

\* For example, the second round starts at `00:15`, the fourth round starts at `00:45`, and the seventh round starts at `01:30`.

You are given two strings `loginTime` and `logoutTime` where:

\* `loginTime` is the time you will login to the game, and \* `logoutTime` is the time you will logout from the game.

If `logoutTime` is **earlier** than `loginTime`, this means you have played from `loginTime` to midnight and from midnight to `logoutTime`.

Return the number of full chess rounds you have played in the tournament.

**Note:** All the given times follow the 24-hour clock. That means the first round of the day starts at `00:00` and the last round of the day starts at `23:45`.

**Example 1:**

**Input:** loginTime = "09:31", logoutTime = "10:14" **Output:** 1 **Explanation:** You played one full round from 09:45 to 10:00. You did not play the full round from 09:30 to 09:45 because you logged in at 09:31 after it began. You did not play the full round from 10:00 to

10:15 because you logged out at 10:14 before it ended.

**\*\*Example 2:\*\***

**\*\*Input:\*\*** loginTime = "21:30", logoutTime = "03:00" **\*\*Output:\*\*** 22 **\*\*Explanation:\*\*** You played 10 full rounds from 21:30 to 00:00 and 12 full rounds from 00:00 to 03:00. 10 + 12 = 22.

**\*\*Constraints:\*\***

\* `loginTime` and `logoutTime` are in the format `hh:mm`. \* `00` <= hh <= 23 \* `00` <= mm <= 59 \* `loginTime` and `logoutTime` are not equal.

## Code Snippets

### C++:

```
class Solution {
public:
    int numberOfRounds(string loginTime, string logoutTime) {

    }
};
```

### Java:

```
class Solution {
    public int numberOfRounds(String loginTime, String logoutTime) {

    }
}
```

### Python3:

```
class Solution:
    def numberOfRounds(self, loginTime: str, logoutTime: str) -> int:
```