1904. The Number of Full Rounds You Have Played

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A new online video game has been released, and in this video game, there are **15-minute** rounds scheduled every **quarter-hour** period. This means that at `HH:00`, `HH:15`, `HH:30` and `HH:45`, a new round starts, where `HH` represents an integer number from `00` to `23`. A **24-hour clock** is used, so the earliest time in the day is `00:00` and the latest is `23:59`.

Given two strings `startTime` and `finishTime` in the format `"HH:MM"` representing the exact time you **started** and **finished** playing the game, respectively, calculate the **number of full rounds** that you played during your game session.

- For example, if `startTime = "05:20"` and `finishTime = "05:59"` this means you played only one full round from `05:30` to `05:45`. You did not play the full round from `05:15` to `05:30` because you started after the round began, and you did not play the full round from `05:45` to `06:00` because you stopped before the round ended.

If `finishTime` is **earlier** than `startTime`, this means you have played overnight (from `startTime` to the midnight and from midnight to `finishTime`).

Return *the **number of full rounds** that you have played if you had started playing at* `startTime` *and finished at* `finishTime`.

User Accepted:	3829
User Tried:	4637
Total Accepted:	3987
Total Submissions:	10719
Difficulty:	Medium

Example 1:

```
Input: startTime = "12:01", finishTime = "12:44"
Output: 1
Explanation: You played one full round from 12:15 to 12:30.
You did not play the full round from 12:00 to 12:15 because you started playing at 12:01 after it began.
You did not play the full round from 12:30 to 12:45 because you stopped playing at 12:44 before it ended.
```

Example 2:

```
Input: startTime = "20:00", finishTime = "06:00"
Output: 40
Explanation: You played 16 full rounds from 20:00 to 00:00 and 24 full rounds from 00:00 to 06:00.
16 + 24 = 40.
```

Example 3:

```
Input: startTime = "00:00", finishTime = "23:59"
Output: 95
Explanation: You played 4 full rounds each hour except for the last hour where you played 3 full rounds.
```

Constraints:

- `startTime` and `finishTime` are in the format `HH:MM`.
- `00 <= HH <= 23`
- `00 <= MM <= 59`
- `startTime` and `finishTime` are not equal.

Discuss (https://leetcode.com/problems/the-number-of-full-rounds-you-have-played/discuss)

JavaScript ▾

```javascript
 1 ▾ const numberOfRounds = (st, ft) => {
 2       let as = st.split(':');
 3       let af = ft.split(':');
 4       let [hs, ms, hf, mf] = [Number(as[0]), Number(as[1]), Number(af[0]), Number(af[1])];
 5       let tmpst = forwardst(hs, ms);
 6       [hs, ms] = [tmpst[0], tmpst[1]];
 7       let tmpft = backwardft(hf, mf);
 8       [hf, mf] = [tmpft[0], tmpft[1]];
 9       let tot = 0;
10 ▾     if (hs < hf || (hs == hf && ms <= mf)) {
11           tot += (60 - ms);
12           hs++;
13           tot += (hf - hs) * 60;
14           tot += mf;
15 ▾     } else {
16           tot += (60 - ms);
17           hs++;
18           tot += (24 - hs) * 60;
19           tot += hf * 60;
20           tot += mf;
21       }
22       return tot / 15;
23   };
24
25 ▾ const forwardst = (hour, minute) => {
26       if (minute == 0 || minute == 15 || minute == 30 || minute == 45) return [hour, minute];
27 ▾     if (minute > 0 && minute < 15) {
28           return [hour, 15];
29 ▾     } else if (minute > 15 && minute < 30) {
30           return [hour, 30];
31 ▾     } else if (minute > 30 && minute < 45) {
32           return [hour, 45];
33 ▾     } else if (minute > 45 && minute < 60) {
34           return [hour + 1, 0];
35       }
36   };
37
38 ▾ const backwardft = (hour, minute) => {
39       if (minute == 0 || minute == 15 || minute == 30 || minute == 45) return [hour, minute];
40 ▾     if (minute > 0 && minute < 15) {
41           return [hour, 0];
42 ▾     } else if (minute > 15 && minute < 30) {
43           return [hour, 15];
44 ▾     } else if (minute > 30 && minute < 45) {
45           return [hour, 30];
46 ▾     } else if (minute > 45 && minute < 60) {
47           return [hour, 45];
48       }
49   };
```

☐ **Custom Testcase**   (Use Example Testcases)

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Submission Result: *Accepted* *(/submissions/detail/510452065/)* ❓   (More Details ❯ (/submissions/detail/510452065/))

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