J. Flight Duration

Program:	flight.(cpp|java)
Input:	flight.in
Balloon Color:	Pink

Description

I have always had a problem with time! No, hold your horses, not reading time, I can read a clock (both analog and digital) very well, thank you! But rather figuring out a flight's duration when the origin and destination are on two different time zones. Will you help me out?

Write a program that reads a flight's take off time, it's time zone, and landing time and the destination's time zone, and calculates the flight's duration.

Input Format

The input starts with a number **T** that represents the number of test cases in the file. Each test case is described on single line of the following form:

hh_1:mm_1 dd_1GMT hh_2:mm_2 dd_2GMT

where **hh_1:mm_1** represents the time of departure in a 24 hour format, and **dd_1** (-12<=**dd_1**<=+12) is the time zone of the flight's origin. Similarly, **hh_2:mm_2** and **dd_2** are to describe landing time, and destination's time zone.

Output Format

For each test case print one line of output in the form:

k. h:mm

where **k** is the test case number (starting at 1), and **h:mm** is the time the flight takes. Note that flight duration will always be less than 24 hours.

Sample Input / Output

flight.in

```
2
09:05 +03GMT 13:30 +00GMT
20:00 +02GMT 04:00 -02GMT
```

OUTPUT

```
1. 7:25
2. 12:00
```