# CCC '16 J4 - Arrival Time

Fiona commutes to work each day. If there is no rush-hour traffic, her commute time is 2 hours. However, there is often rush-hour traffic. Specifically, rush-hour traffic occurs from 07:00 (7am) until 10:00 (10am) in the morning and 15:00 (3pm) until 19:00 (7pm) in the afternoon. During rush-hour traffic, her speed is reduced by half.

She leaves either on the hour (at XX:00), 20 minutes past the hour (at XX:20), or 40 minutes past the hour (at XX:40).

Given Fiona's departure time, at what time does she arrive at work?

## **Input Specification**

The input will be one line, which contains an expression of the form [HH:MM], in which [HH] is one of the 24 starting hours (00, 01, ..., 23) and [MM] is one of the three possible departure minute times (00, 20, 40).

## **Output Specification**

Output the time of Fiona's arrival, in the form [HH:MM].

#### Sample Input 1

05:00

## **Output for Sample Input 1**

07:00

## **Explanation for Output for Sample Input 1**

Fiona does not encounter any rush-hour traffic, and leaving at 5am, she arrives at exactly 7am.

## Sample Input 2

07:00

## **Output for Sample Input 2**

10:30

## **Explanation for Output for Sample Input 2**

Fiona drives for 3 hours in rush-hour traffic, but only travels as far as she normally would after driving for 1.5 hours. During the final 30 minutes (0.5 hours) she is driving in non-rush-hour traffic.

## Sample Input 3

23:20

## **Output for Sample Input 3**

01:20

## **Explanation for Output for Sample Input 3**

Fiona leaves at 11:20pm, and with non-rush-hour traffic, it takes two hours to travel, so she arrives at 1:20am the next day.