The Temperature Configuration

You've just arrived at your hotel room and decide to check the thermostat's programmed schedule. Each schedule entry consists of a set target temperature and a time when the instruction will be executed (i.e., when the temperature change goes into effect).

Given the room's initial temperature, the rate of speed at which the heating/cooling unit raises or lowers the temperature (in Celsius degrees per hour), and the thermostat's schedule, can you determine the room's final temperature at a given time?

Input Format

Stub code in the editor reads a string representing a JSON object and passes it to *processData* as $input$; the JSON object has four properties: `speed`, `inputs`, `endTime` and `initialTemperature`. Each property is defined as follows:

- `speed` is number representing the rate at which the temperature will change (in Celsius degrees per hour).
- `inputs` is an array of objects; each object has two properties:
  1. `time` is a string representing when the temperature change will start.
  2. `temperature` is an integer representing the target temperature being set at the given time.
- `endTime` is a string denoting the time you must find the final temperature for.
- `initialTemperature` is a number representing the room's initial temperature.

Constraints

- $1 \leq$ `speed` ≤ 20
- $0 \leq$ `temperature` ≤ 40
- It is guaranteed that `time` and `endTime` are in the format `YYYY-MM-DD HH:mm`, where where `YYYY` is a 4-digit year, `MM` is a 2-digit month, `DD` is a 2-digit day, `HH` is a 2-digit hour (where $00 \leq hour \leq 23$), and `mm` is a 2-digit minute representation (where $00 \leq minute \leq 59$).
- The $inputs$ array is always ordered chronologically; the first item has the oldest date and the last item has the most recent date.

Output Format

Using the `console.log` command, print the final temperature at the given `endTime`.

Sample Input

```
{"speed":10,"inputs":[{"time":"2016-09-11 11:00","temperature":25},{"time":"2016-09-11 12:00","temperature":35}],"endTime":"2016-09-11 12:30","initialTemperature":15}
```

Sample Output

```
30
```

Explanation

The unit heats/cools 10 degrees per hour and the room's initial temperature is 15 degrees. The schedule is as follows:

- `2016-09-11 11:00`: set the target temperature to 25.
- `2016-09-11 12:00`: set the target temperature to 35.

```
{
  speed: 10,
  inputs: [
    { time: '2016-09-11 11:00', temperature: 25 },
    { time: '2016-09-11 12:00', temperature: 35 }
  ],
  endTime: '2016-09-11 12:30',
  initialTemperature: 15
}
```

At the given end time of $2016\text{-}09\text{-}11\ 12{:}30$, the temperature will be 30 degrees.