The Case of the Missing Clock

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

You are a detective on the case of a stolen clock. The clock was taken from a wealthy collector's mansion in the dead of night, and the only clue left behind is the angle between the hour and minute hands on the clock's face. You know that the thief took the clock at a specific time, and you need to figure out what that time was.

You decide to use your knowledge of clock angles to help solve the case. Write a program that takes the angle between the minute and hour hand of a clock and returns a valid time on the clock that corresponds to that angle.

Input

The first line of input consists of an Integer T ($1 \leq T \leq 1000$) denoting the number of test cases. Each of the following T lines contains a single floating-point number with one decimal point θ, ($0 \leq \theta \leq 180$), representing the angle between the hour and minute hands of the clock for a particular test case.

Output

Output T lines, each containing a valid time on the clock in the format ḦH:MM; where HH is the hour (01 to 12) and MM is the minute (00 to 59), such that the angle between the hour and minute hand of the clock is equal to the corresponding input angle. If there are multiple valid times, output any one of them.

It is guaranteed that at least one valid time exists for any given input.

Example

standard input	standard output
2 90.0 142.5	03:00 10:15