**Word Clock**

Maddie would like to create a clock that reads a time given in digital format and convert it to a word format using the following rules:

* If the minutes are “00”, then you it will be “[hour] o’ clock”.
* If the minutes are less than 30, you will output “[minutes] minutes past [hour]
  + If the minute is 1, then you will only output “minute” instead of “minutes”.
  + If the minutes are either 15 or 45, you will output “quarter [past/to] [hour]”.
* If the minutes are greater than 30, you will output “[minutes] minutes to [hour]”.
* If the minutes are exactly 30, then you will output “half past [hour]”.

**Input:** The first line of input contains **T** the number of test cases. The next **T** lines contain two space-separated integers. The two integers represent **h**, the hours and **m,** the minutes respectively.

**Output:** You will first output “CASE #(case number): “ followed by the time in word format.

**Example Input:**

6

7 47

1 1

4 30

3 15

3 27

5 0

**Example Output:**

CASE #1: thirteen minutes to eight

CASE #2: one minute past one

CASE #3: half past four

CASE #4: quarter past three

CASE #5: twenty seven minutes past three

CASE #6: five o’ clock