"As a special bonus, if they order
by midnight, what would they receive?
Colin: *They'd receive it earlier than if*
they'd ordered it later.
`Songs of the Butcher`

Colin and Ryan had a party. They baked C cookies and invited G guests. Each guest ate Q cookies, and R cookies were left ($R < Q$).

Input

The first line of input gives the number of cases, N. N test cases follow. Each one is a line containing C and R (at most 2000000000).

Output

For each test case, output one line containing 'Case #x:' followed by Q — the number of cookies each guest ate. If there are multiple answers, print them in increasing order, separated by spaces. Do not print trailing spaces. Print a '0' in the case when $R = C$.

Sample Input

```
4
10 0
13 2
300 98
1000 997
```

Sample Output

```
Case #1: 1 2 5 10
Case #2: 11
Case #3: 101 202
Case #4:
```