Problem C. Division by 3

Time limit 1000 ms
Mem limit 65536 kB

There is sequence `1, 12, 123, 1234, ..., 12345678910, ...`. Now you are given two integers **A** and **B**, you have to find the number of integers from $\mathbf{A}^{\mathbf{th}}$ number to $\mathbf{B}^{\mathbf{th}}$ (inclusive) number, which are divisible by **3**.

For example, let A = 3. B = 5. So, the numbers in the sequence are, 123, 1234, 12345. And 123, 12345 are divisible by 3. So, the result is 2.

Input

Input starts with an integer **T (≤ 10000)**, denoting the number of test cases.

Each case contains two integers **A** and **B (1 ≤ A ≤ B < 2^{31})** in a line.

Output

For each case, print the case number and the total numbers in the sequence between $\mathbf{A}^{\mathbf{th}}$ and $\mathbf{B}^{\mathbf{th}}$ which are divisible by **3**.

Sample

Input	Output
2 3 5 10 110	Case 1: 2 Case 2: 67