

5684 Roll-call in *Woop Woop* High

The new principal of *Woop Woop* High is not satisfied with her pupils performance. She introduced a new roll-call process to get a daily measure of the pupils' learning, which proceeds as follows:

At the beginning of the daily roll-call period each pupil is handed a question, which they must attempt to answer, before proceeding to their classes. A pupil stops after the question is answered correctly. Each pupil is allowed up to five attempts to answer the question correctly.

Pupils who answer correctly on the first attempt are marked present. Pupils who answer correctly after more than one attempt are encouraged to work at home. Pupils who fail to develop a correct answer within five attempts are given remedial classes after school. Pupils who do not give any answer are marked as absent.

Your task is to write a program that reads the pupils' assessments and generates performance reports for the principal to proceed with appropriate actions.

Input

The input starts with an integer K ($1 \leq K \leq 100$) indicating the number of classes. Each class starts with an integer N ($1 \leq N \leq 50$) indicating the number of pupils in the class. Each of the following N lines starts with a pupil's name followed by up-to five assessments of his/her answers. An assessment of 'yes' or 'y' indicates a correct answer and an assessment of 'n' or 'no' indicates a wrong answer. A pupil's name consists of a single string with no white spaces.

Output

The attendance report for each class consists of five lines.

- The first line consists of the sentence: 'Roll-call: X ', where X indicates the class number starting with the value of one.
- The second line consists of the sentence: 'Present: Y_1 out of N ', where Y_1 is the number of pupils who did not submit a wrong answer.
- The third line consists of the sentence: 'Needs to study at home: Y_2 out of N ', where Y_2 is the number of pupils who submitted a number of wrong answers before submitting the correct answer.
- The fourth line consists of the sentence: 'Needs remedial work after school: Y_3 out of N ', where Y_3 indicates the number of pupils whose submitted five wrong answers.
- The fifth line consists of the sentence: 'Absent: Y_4 out of N ', where Y_4 indicates the number of absent pupils.

Sample Input

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2
5
Doc n y
sneezy n n no yes
princecharming no n no no n
goofy yes
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grumpy n y
5
evilemperor n y
princesslia
r2d2 no no y
obeyonecanopy n no y
darthvedar y

Sample Output

Roll-call: 1
Present: 1 out of 5
Needs to study at home: 3 out of 5
Needs remedial work after school: 1 out of 5
Absent: 0 out of 5
Roll-call: 2
Present: 1 out of 5
Needs to study at home: 3 out of 5
Needs remedial work after school: 0 out of 5
Absent: 1 out of 5