Basic text manipulation 01

Some documents in telecom domain specifies information in a stupid bad style.

One of those styles, is to write many parameters in a single line.

In this problem you will be given the input in the following format:

TYPE 1:[space?]<A_NUMBER>[space?], TYPE 2:[space?]<B_NUMBER>[space?], TYPE 3:[space?]<C_NUMBER>[space?], TYPE details:[space?]<D_TEXT>

You will extract the parameters and write them in the following style:

(A_NUMBER,<B_NUMBER_x>,<C_NUMBER_x>,'<D_TEXT>')

Input

t. number of test cases 1 <= t <= 20

Then comes *t* lines with the following format (bold text is for parameters)

TYPE 1:[space?]<A_NUMBER>[space?], TYPE 2:[space?]<B_NUMBER>[space?], TYPE 3:[space?]<C_NUMBER>[space?], TYPE details:[space?]<D_TEXT>

<A_NUMBER>: An Integer between 0 and 100

<B_NUMBER>: An Integer between 0 and 100 OR empty IF A_NUMBER IS 0

<C_NUMBER>: An Integer between 0 and 100 <u>OR</u> empty IF B_NUMBER IS (0 or empty)

TEXT>: A string of readable characters, the length of it is between 1 and 20

[space?]: means that there might be a space there.

Output

t lines, each of the following format

(<A NUMBER>,<B NUMBER x>,<C NUMBER x>,'<D TEXT>')

Where **B NUMBER** x: is **B NUMBER** or NULL if **B NUMBER** was empty

and **C_NUMBER_x**: is **C_NUMBER** or NULL if **C_NUMBER** was empty

Note the single quotes around **<D TEXT>**.

Example

Input:

3

TYPE 1: 2, TYPE 2: 0, TYPE 3: , TYPE details: n/a TYPE 1: 2, TYPE 2: 1, TYPE 3:0 , TYPE details: nothing TYPE 1: 0, TYPE 2: , TYPE 3: , TYPE details: nice

Output:

(2,0,NULL,'n/a') (2,1,0,'nothing') (0,NULL,NULL,'nice')