The background of the Fractal Problem

Fractal refers to a geometric shape containing detailed structure at arbitrarily small scales. Fractals are infinitely complex patterns that are self-similar across different scales.

There is a fractal defined as follows:

When level n=1:

```
0
```

When level n=2

```
0 0
 0
0 0
```

When level n=3：

```
0 0   0 0
 0     0
0 0   0 0
   0 0
    0
   0 0
0 0   0 0
 0     0
0 0   0 0
```

If we use X (n-1) to represent a fractal at level (n-1), then the Fractal X (n) is represented as:

X(n-1) X(n-1)

X(n-1)

X(n-1) X(n-1)

Specification of the Fractal Problem

For a given character o，and the fractal at level (n) 2，print out the fractals at required levels in the range of n (n<=7).

Inputs

The inputs include multiple groups of samples.

The first line is the groups of fractals *m*.

The second line and after are sample fractals.

Each sample fractal is described in four lines: the first line is the level of the fractal (n) to be printed, and 2^{nd} -4^{th} lines are its fractal at level 2. The fractal at level 2 is fixed to take 3 columns and 3 rows.

Outputs

For each set of characters specifying a fractal, print out corresponding fractal at n level; print a blank line after each fractal; and don’t keep extra empty space in any line.

Sample Inputs

```
2

3
 o
ooo
 o
3
o o
 o
o o
```

Sample Outputs

```
      o
     ooo
      o
  o   o   o
ooooooooo
  o   o   o
      o
     ooo
      o


o o     o o
 o       o
o o     o o
    o o
      o
    o o
o o     o o
 o       o
o o     o o
```