

3093 IP Address

Suppose you are reading byte streams from any device, representing IP addresses. Your task is to convert a 32 characters long sequence of '1's and '0's (bits) to a dotted decimal format.

A dotted decimal format for an IP address is form by grouping 8 bits at a time and converting the binary representation to decimal representation. Any 8 bits is a valid part of an IP address.

To convert binary numbers to decimal numbers remember that both are positional numerical systems, where the first 8 positions of the binary systems are:

$$\begin{array}{cccccccc} 2^7 & 2^6 & 2^5 & 2^4 & 2^3 & 2^2 & 2^1 & 2^0 \\ 128 & 64 & 32 & 16 & 8 & 4 & 2 & 1 \end{array}$$

Input

The input file will have a number N ($1 \leq N \leq 9$) in its first line representing the number of streams to convert. N lines will follow.

Output

The output file must have N lines with a dotted decimal IP address. A dotted decimal IP address is formed by grouping 8 bit at the time and converting the binary representation to decimal representation.

Sample Input

```
4
00000000000000000000000000000000
00000011100000001111111111111111
11001011100001001110010110000000
01010000000100000000000000000001
```

Sample Output

```
0.0.0.0
3.128.255.255
203.132.229.128
80.16.0.1
```