4. IP Addresses

Program Name: IP.java Input File: ip.dat

IP addresses are formed from 32 character data streams of 1s and 0s. The decimal format of an IP address is formed by grouping 8 bits at a time and converting each binary group to a decimal number. Decimal IP addresses are written in the form of four integers separated by periods. An example of an IP address is 10.103.45.230.

Input

The first line of input will contain a single integer n that indicates the number of IP addresses to follow. Each of the following n lines will contain a 32 character binary number.

Output

For each binary IP address input, you will print the decimal format of the address.

Example Input File

Example Output to Screen

255.255.255.255 3.128.255.255 240.170.85.7 170.170.170.170