

Copier Crime

Program Name: copier.java Input File: copier.in

Though few people know it, many manufacturers of color laser printers and color copiers encode identifying information onto every sheet of paper that passes through their machines, enabling counterfeit bills to be traced back to the machines that printed them.

In this case, assume that the identifying marks are a series of small yellow dots and that you, as a government agent tasked with catching a counterfeiter, need to determine the serial number of the machine that made some counterfeit bills. The series of dots have already been transcribed for you, with dashes filled in to denote blank space. Each dot/dash sequence is fifteen units long, representing a series of five, three-digit binary numbers (with a dot representing '1' and a dash representing '0'). A decoded serial number is constructed by concatenating the decimal equivalents of each of the binary triplets.

For instance, the sequence:

...-.-.-.-.-.-.-

represents:

110100110111010

which broken into triplets is:

110 100 110 111 010

translating each triplet to decimal gives:

6 4 6 7 2

So the serial number represented is:

64672

Your task is to decode each dot/dash sequence and display the corresponding serial number.

Input

The first line will contain a single integer n indicating the number of serial numbers that need to be translated. Each of the next n lines will contain a fifteen character sequence of dots (periods) and dashes (hyphens).

Output

For each encoded serial number listed in the input, display the decoded serial number on its own line.

Example Input File

4

...-.-.-.-.-.-.-

...-.-.-.-.-.-.-

---...-.-.-.-.-.-

-----...-.-.-.-.-

Example Output To Screen

64672

70707

07070

01234