

Problem 3—Ruler

Mary Ann Summers is obsessed with the question of who is the most attractive woman on the island (although, unknown to her, 85% of all Americans believe that, in fact, she herself was!) To this end, she is making a ruler in order to measure certain things. While doing this, she becomes fascinated with the pattern of lines on a ruler: The one-inch mark is a line of a certain length. The half-inch mark is smaller; the 1/4 and 3/4 are smaller yet; the 1/8, 3/8, 5/8, and 7/8 are smaller yet, and so forth.

What many do not realize is that Mary Ann picked up a fair amount of math from all her years in the kitchen. She observes that the number of divisions of an inch is always a power of 2. (1, 2, 4, 8, etc.) She observes as well that if you were to count from 1 to that number of divisions in binary, the length of the marks in sequence match the location of the right-most 1 digit (counting from the right-end of the numeral) in that binary representation. For example, if there are 8 divisions in the line, counting to eight in binary is: 0001,0010,0011,0100,0101,0110,0111,1000. The positions of the right-most 1 digits are, respectively, 1, 2, 1, 3, 1, 2, 1, 4. This would exactly match the lengths of the segments marking the eighth-inch divisions!

Given the number of divisions of an inch, you are to print the appropriate ruler divisions for one inch.

INPUT SPECIFICATION. Each input case will be an unsigned decimal integer inclusively between 2 and 256 followed by <EOLN>. Each integer will be an integral power of 2. Following the last test case will be a single line consisting of 0 followed by <EOLN>. This case signals the end of input and is not to be processed.

OUTPUT SPECIFICATION. The output solutions should appear in the same order as their corresponding input cases. Giving a formal output specification is pointless. Follow instead the example below. Note that each output case is followed by an extra <EOLN> character.

SAMPLE INPUT.

```
4<EOLN>
8<EOLN>
0<EOLN>
<EOF>
```

SAMPLE OUTPUT.

```
--<EOLN>
--<EOLN>
--<EOLN>
---<EOLN>
<EOLN>
--<EOLN>
--<EOLN>
--<EOLN>
---<EOLN>
--<EOLN>
--<EOLN>
--<EOLN>
---<EOLN>
--<EOLN>
--<EOLN>
--<EOLN>
----<EOLN>
<EOLN>
<EOF>
```