Fibonacci Base

The Fibonacci series is obtained by starting with 0 and 1, and each subsequent term in the series is obtained by adding the previous two terms. Given n in the top row of the table below, the numbers in the second row represent Fib(n), the numbers in the Fibonacci series.   So Fib(0)=0, and Fib(1)=1. Then Fib(2)is obtained by adding Fib(0)and Fib(1), or 0+1=1.

n	0	1	2	3	4	5	6	7	8	9	10
Fib(n)	0	1	1	2	3	5	8	13	21	34	55

There are many applications of the Fibonacci series both in mathematics and in the real world. For example, we can represent any positive integer as the sum of one or more of the terms in the Fibonacci series without repetition of any term in the series. For a unique representation, you may not take two successive terms in the Fibonacci series.

Input

The input is an unknown number of lines, each containing a single positive number n (0 < n < 1000).

Output

For each value of n, you will print the Fibonacci terms that add up to it. The Fibonacci terms shall be in descending order and you may not use two successive terms in the Fibonacci series.

Example

Input:
16
29
53
92

Output:
16 = 13 + 3
29 = 21 + 8
53 = 34 + 13 + 5 + 1
92 = 89 + 3