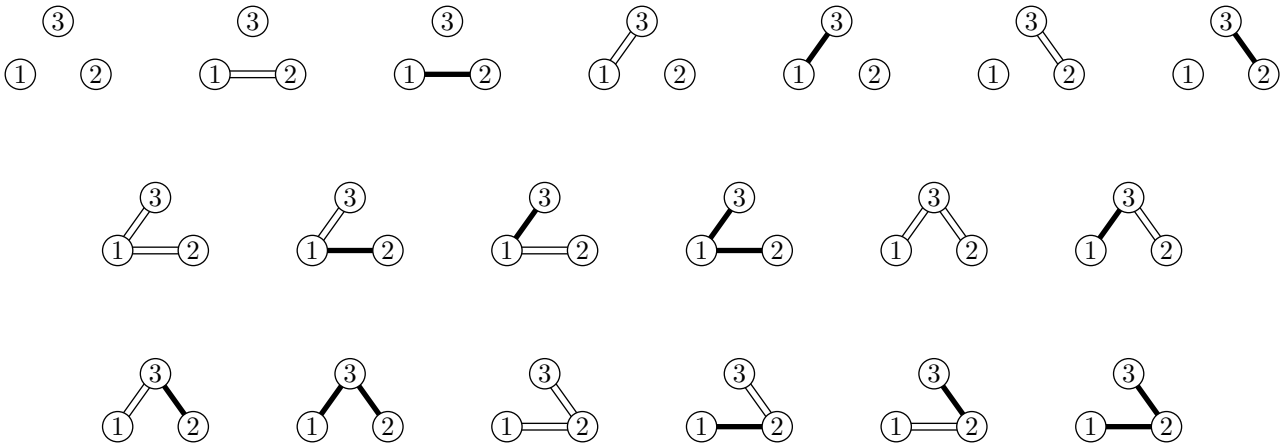
Problem B. Bipartite Bicolored Graphs

Input file:	`bipartite.in`
Output file:	`bipartite.out`
Time limit:	2 seconds
Memory limit:	512 megabytes

The undirected graph G is called *bipartite* if the set of its vertices V can be partitioned into two disjoint subsets $V = X \cup Y$ such that for each edge uv in G its ends u and v belong to different subsets. Graph is called *bicolored* if all of its edges are colored into two colors: black and white.

Given n, find the number of labeled bipartite bicolored graphs with n vertices. The picture below shows all 19 such graphs for $n = 3$. The answer can be quite large, so you have to find it modulo 175 781 251.



Input

The input file contains multiple test cases.

Each test case contains a single integer n on a line by itself ($1 \le n \le 100$).

Input is followed by a line with $n = 0$.

Output

For each test case output one integer: the number of labeled bipartite bicolored graphs with n vertices.

Examples

bipartite.in	bipartite.out
1 2 3 0	1 3 19