Problem of the Week
Problem D
A Pane - Full Experience

A contractor is building new houses. Each house has a large window with width 2 feet and height 8 feet to be made up of eight identical 1 foot by 2 feet glass panes.

The contractor wants each house to look slightly different. The window size is fixed, but he plans on arranging the glass panes in the windows so that no two windows have the same configuration. Two possible arrangements of the glass panes are given below.

Assuming that the glass panes cannot be cut, how many different arrangements can be made?