For any positive integer $n$, consider the set $W_n$ of walks from $(0,0)$ to $(2n - 2,0)$ consisting of up steps $(1,1)$, down steps $(1,-1)$, and horizontal steps $(2,0)$ that:

- do not pass below the $x$-axis, and
- do not contain any valleys, i.e., no down step is immediately followed by an up step.

(a) Draw each of the walks in $W_3$.

(b) Give a bijective proof that the number of walks in $W_n$ is the Catalan number $C_n$. 