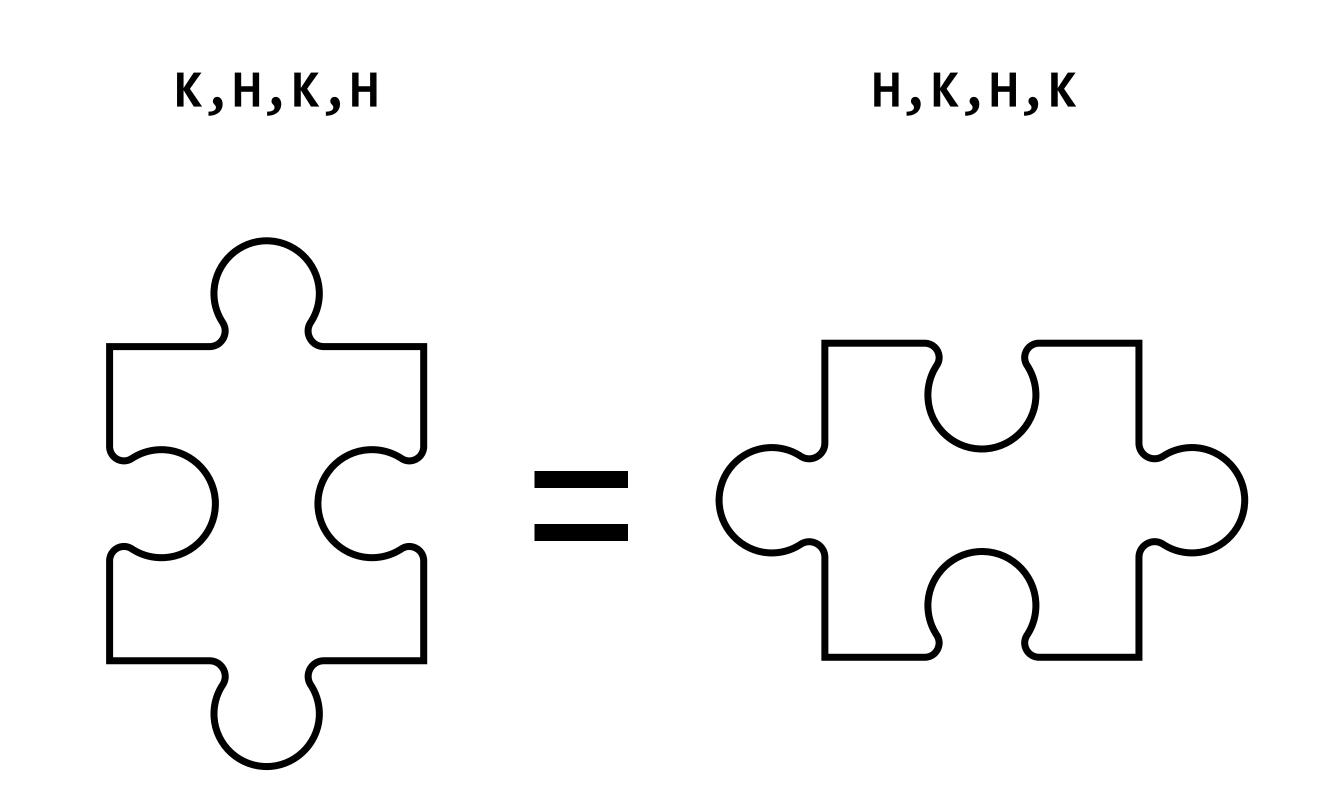


- You are given a list of puzzle pieces, for each piece type, count how often it appears in the given pieces.
- Different orientations of a piece are counted as the same type e.g., K H K H and H K H K are now the same type.
- The 4 characters that describe a piece are given in this order: top, right, bottom, left.



Input - identical to previous level

Name	Description	Example
N	An integer representing the number of pieces.	7 H,H,H,K K,H,K,H H,H,K,K H,H,K K,H,K K,H,K
Piece (repeated N times)	Each side of the piece is represented by a character. 'H' represents a hole. 'K' represents a knob.	

Output - identical to previous level

Name	Description	Example
Piece Type Count (repeated up to N times)	An integer describing how often the piece type occurred, followed by 4 characters describing the piece type. The order of lines does not matter.	2 H,H,H,K 3 H,H,K,K 2 H,K,H,K

