Assignment 1: Folding a Square Twist

This is **due** at the beginning of class on Thursday, Dec. 17. Write a solution to the below assignment question with a full explanation about why your solution is correct (in English, please).

Solutions may be handed in on paper or emailed to me: `thull@wne.edu`

Activity: Below is shown a crease pattern. The creases are all on the 1/4 lines of the square, but the center diamond needs to be "pinched" in place. Take a square piece of paper and reproduce this crease pattern to see how it folds up.

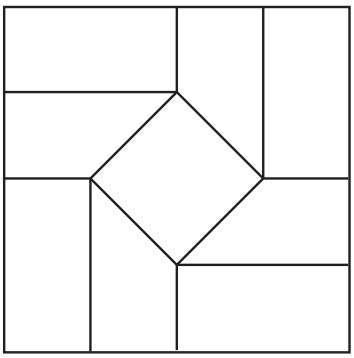
To help you fold this, follow these instructions:

(1) Fold a 4×4 grid of creases on your square.

(2) Pinch the four crease segments that make the diamond in the middle.

(3) Draw the crease pattern below on your creases with a pen.

Then you can try to fold it up using **only the creases shown below**.



This origami maneuver is called a **square twist** and is one of the less obvious ways in which paper can be folded flat.

Assignment Question: Count how many different ways there are to fold this crease pattern flat (without making any new creases). That is, how many different **mountain-valley assignments** for these creases can you find that will fold the model flat?