

# Grapes

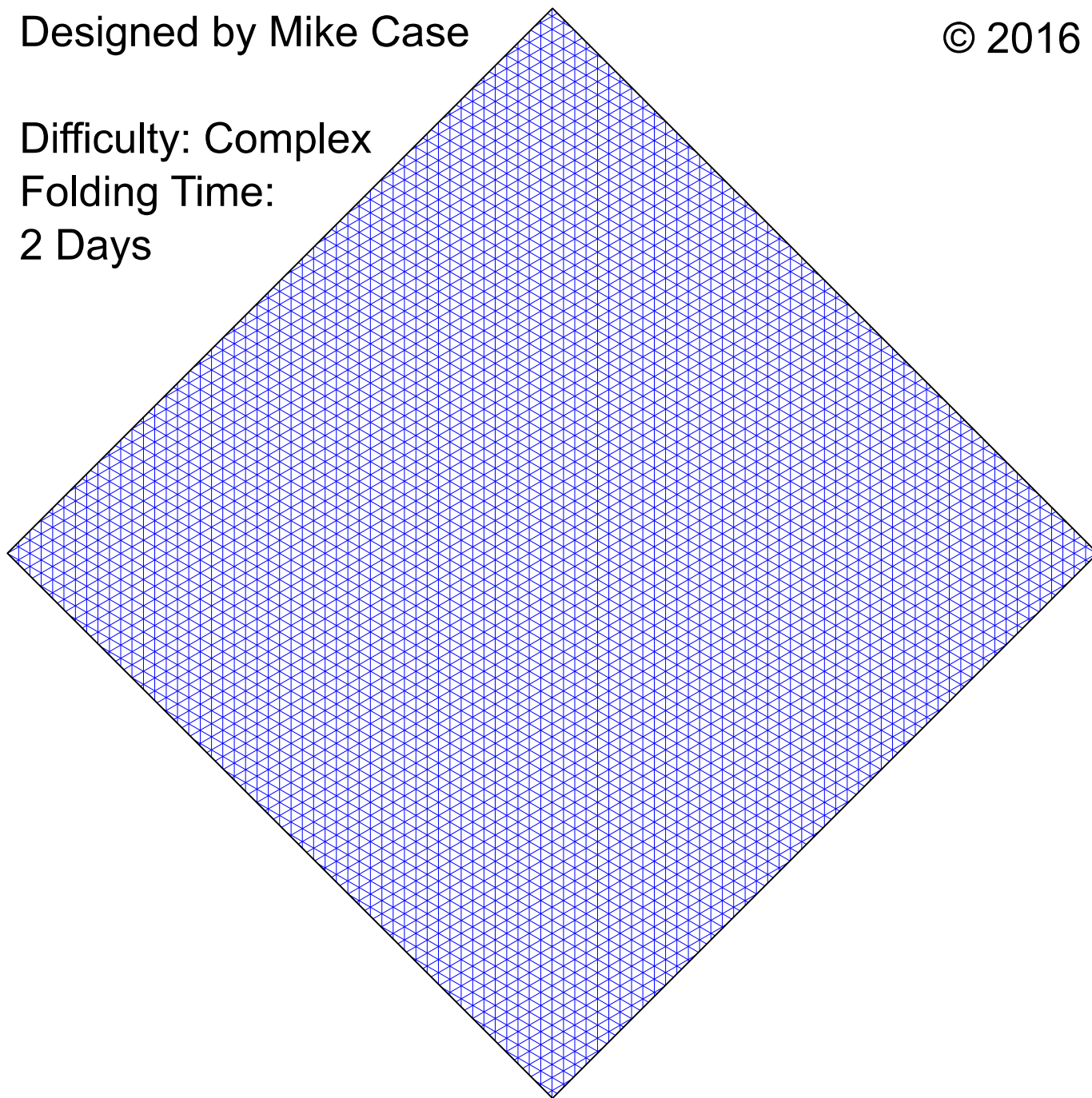
Designed by Mike Case

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Difficulty: Complex

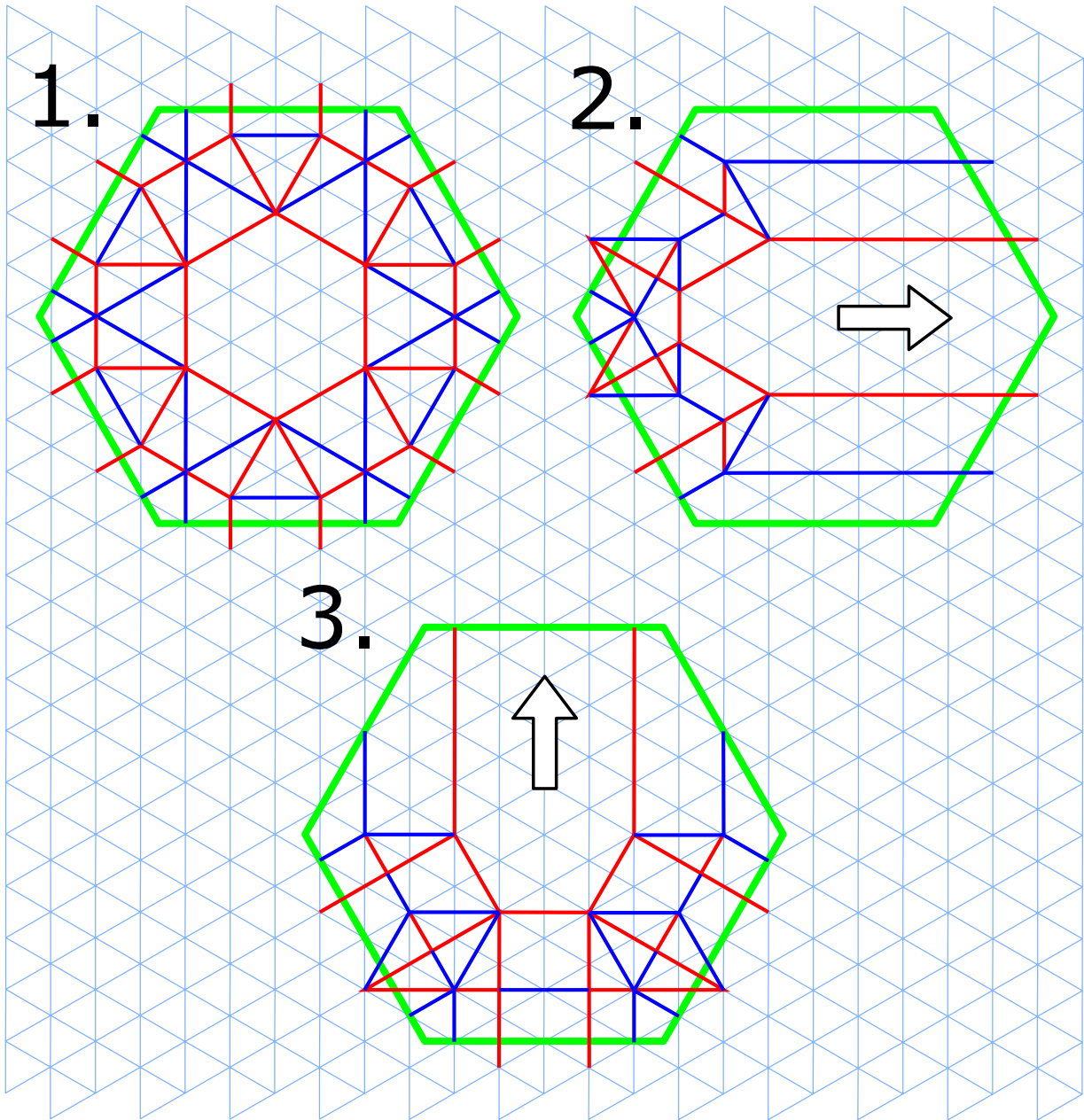
Folding Time:

2 Days



1. Start with a square of paper purple on one side and green on the other. Around 18" to 20" a side makes realistic sized grapes and a manageable grid size.

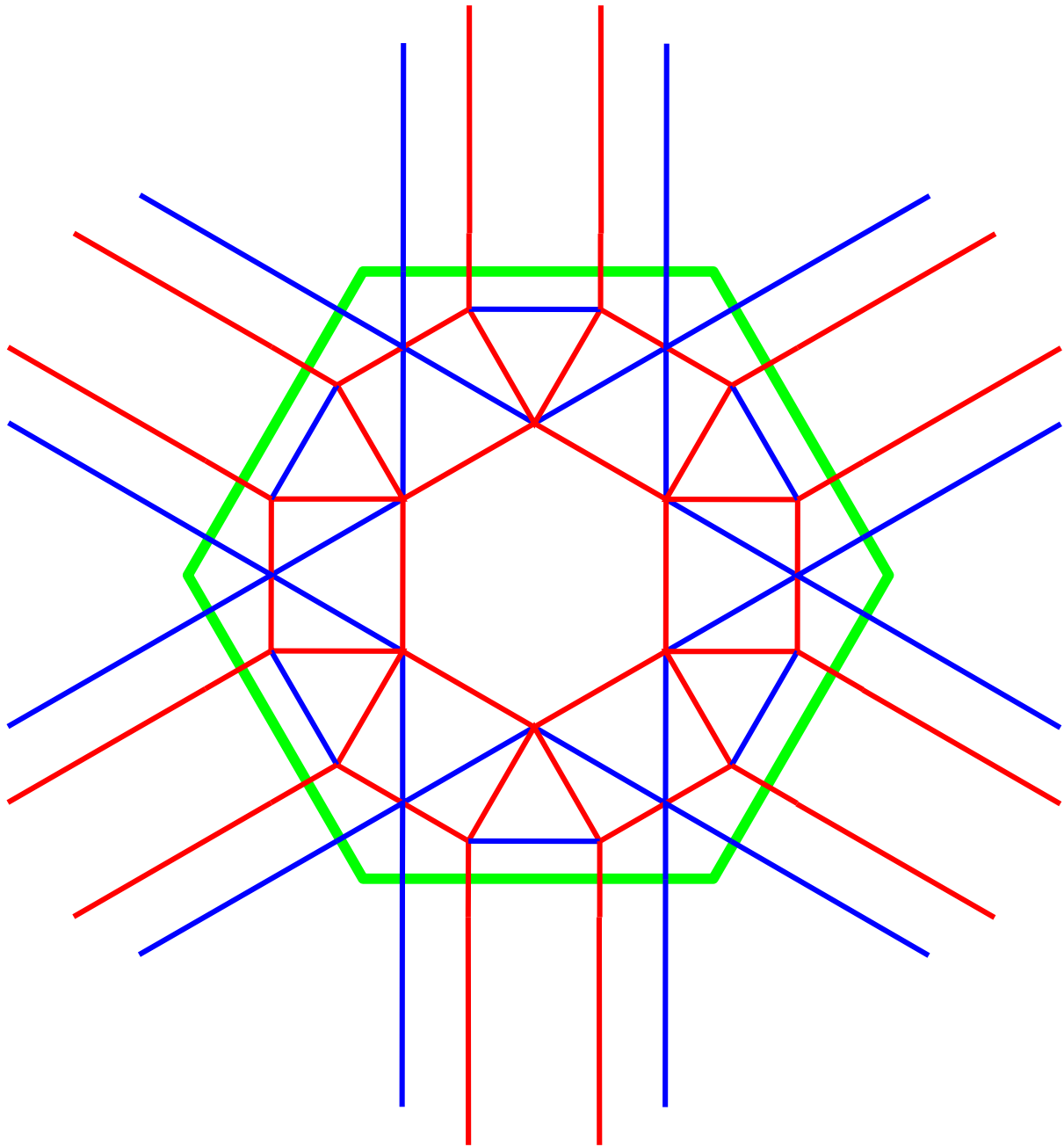
Pre-crease into a triangular grid. The paper will be creased into 96ths diagonally, and then divisions of equal width at 60° to the left and right of the diagonal creases as shown.



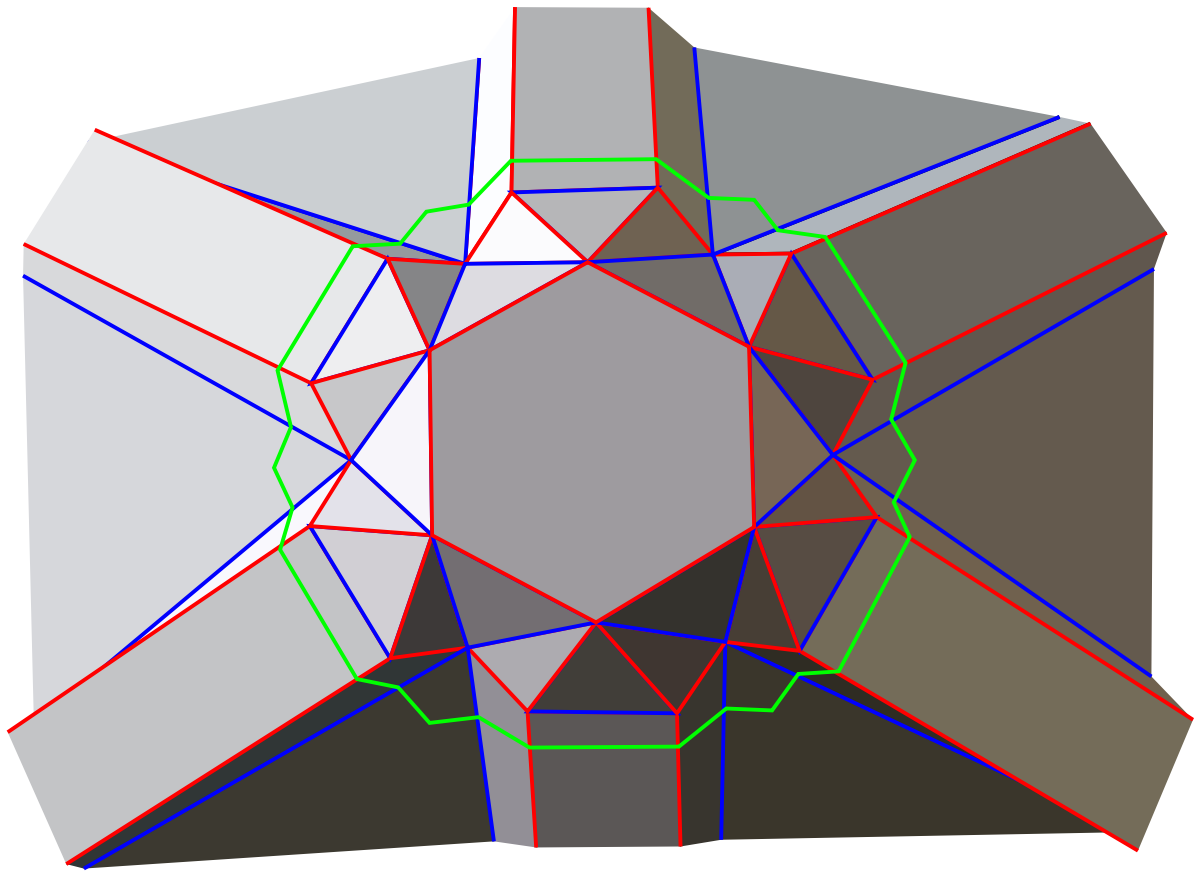
2. There are 3 types of tile used. The first one creates the grapes, and the other two are to combine crossing pleats into a single pleat that carry on to the edge of the paper.

Red lines are mountain folds, blue lines are valley folds.

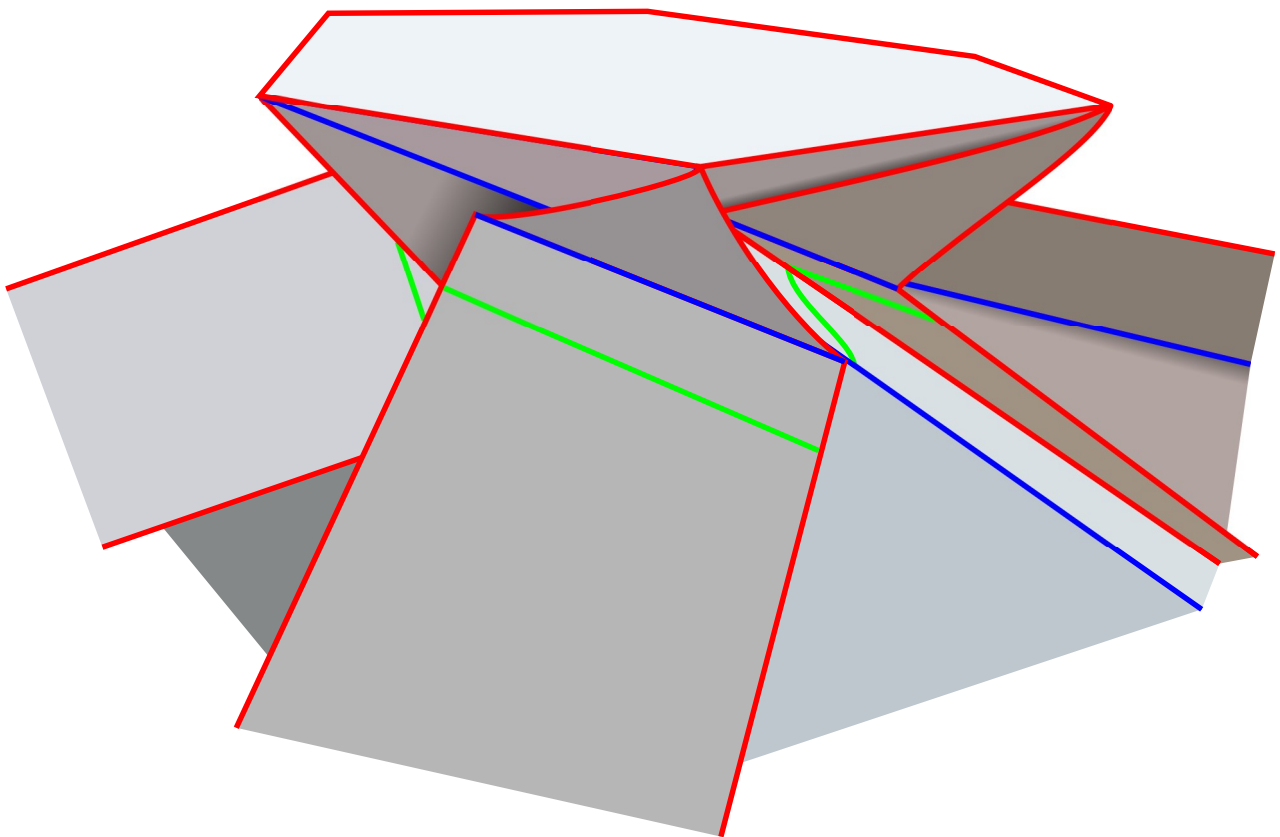




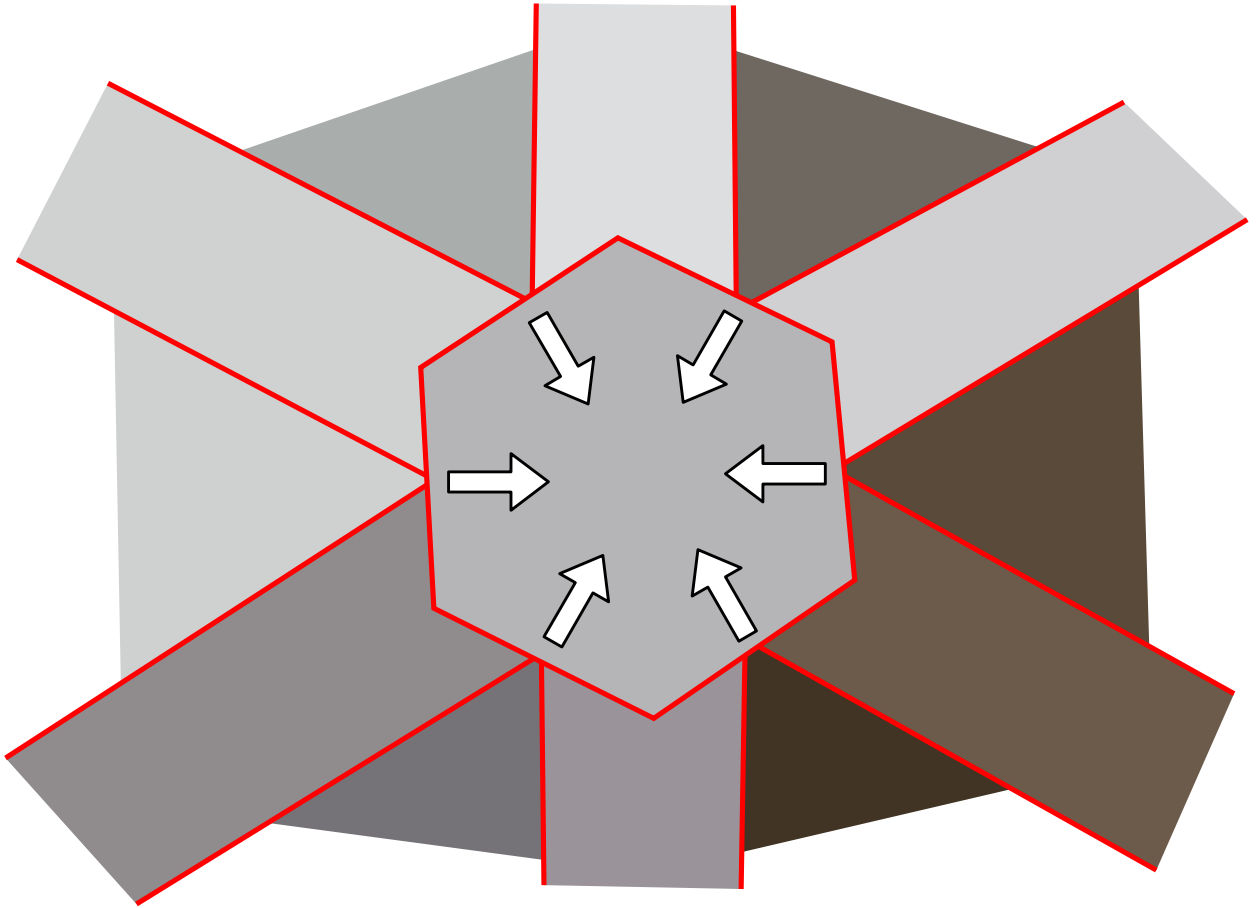
4. Here's an individual grape tile. It's probably useful to fold one on its own before collapsing the whole model.



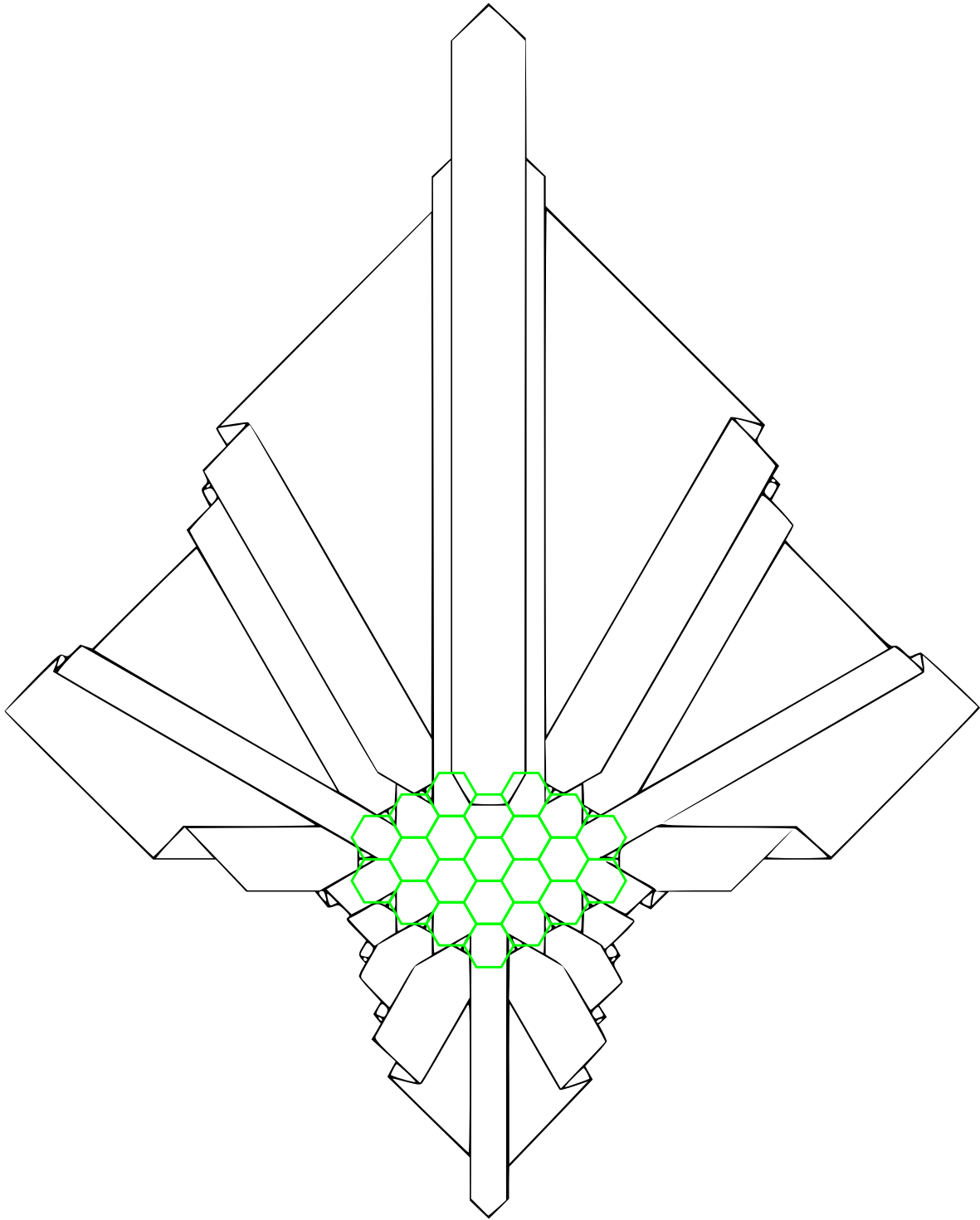
5. Single grape in process of being collapsed.



6. As you collapse it the pleats will try to run into each other. Arranging them like this, where the left edge of the pleat is over the right edge of the one next to it will allow it to lay flat.

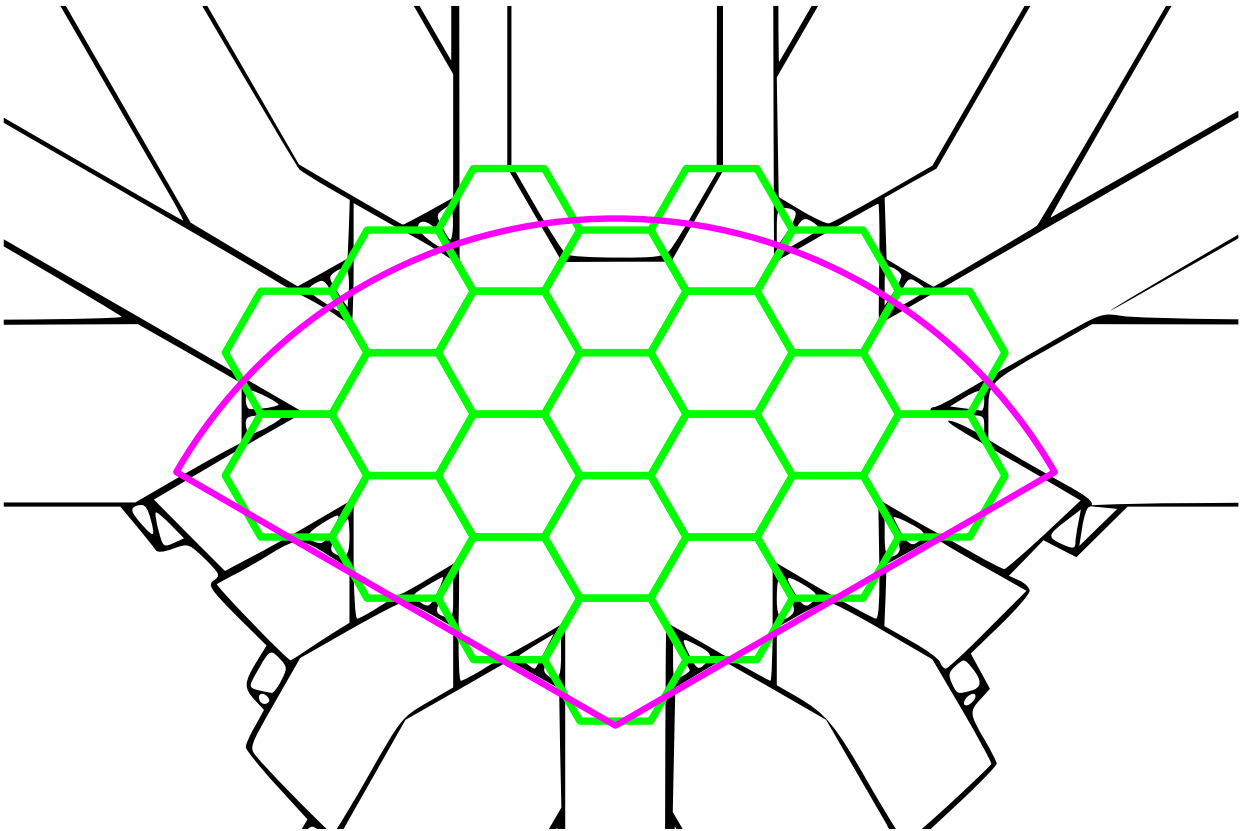


7. A single grape after being collapsed. Once all the grapes are collapsed they'll overlap each other. You can pinch the sides in as shown to make more room. The back will be a tiling of triangles.



8. Once the grapes are all collapsed the paper will look something like this (details of the individual grapes not shown).

Shape each hexagon into a grape. The way I did it was to puff out the centre, put a marble inside each hexagon from the back, tie a string around the base, and use CMC to shape the paper around the marble. Once the grapes were all shaped I let it dry, took off the string, and popped the marbles out.



9. To form the grapes into a bunch, imagine them as a wedge that's  $\frac{1}{3}$  of a circle (in pink above) and roll that wedge into a cone, tucking the paper at the bottom inside and using it to lock the cone closed.

At this point it's just a matter of shaping the remaining paper into leaf, shoot, and stem. There aren't really instructions for this part, but roughly what I did is crimp the stem towards the back and then petal-folded it back upright; then shape this into the stem.

The result of the previous step leaves two pyramid shapes on either side. One of these is flattened and shaped into the leaf. The other is sunk in and out (for the most part using existing creases), creating a long thin point that can be shaped and curled into a shoot.



10. The finished grapes.