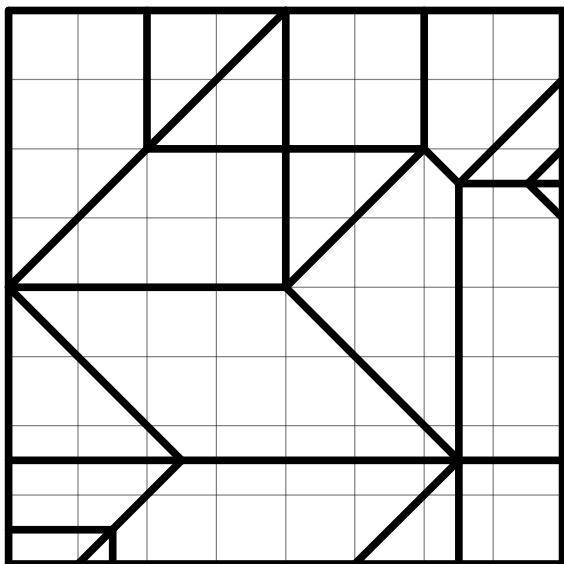


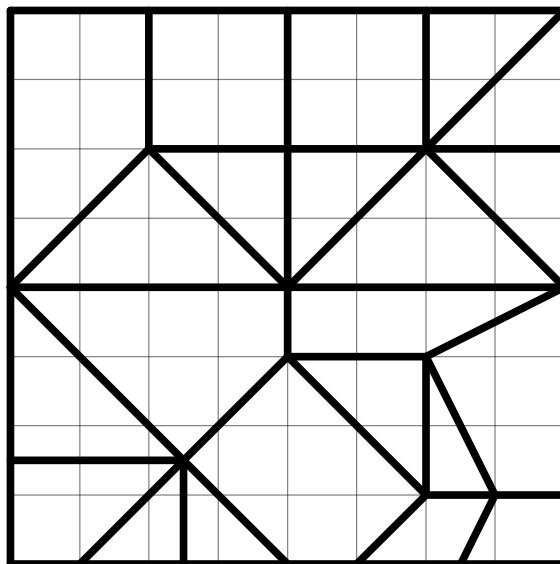
Problem Set 2

Due: Thursday, September 17, 2020

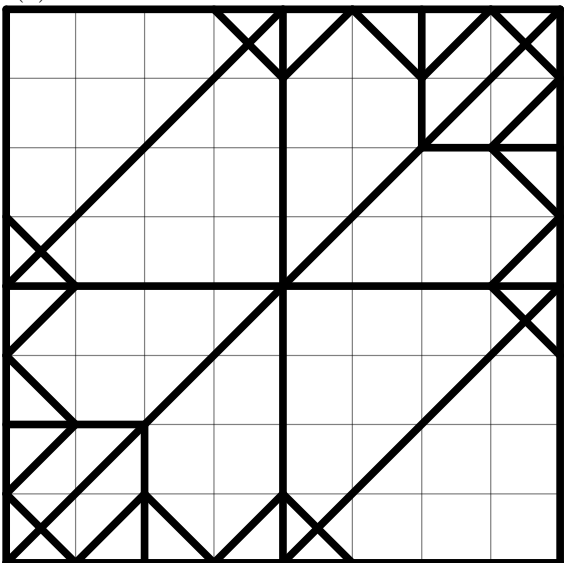
Problem 2.1 [Flat Folding]. Which of the four crease patterns in Figure 1 are flat foldable? Justify each answer by either submitting a photograph of a flat folding or arguing why the crease pattern cannot fold flat. Are any simply foldable (foldable by a sequence of simple folds)?



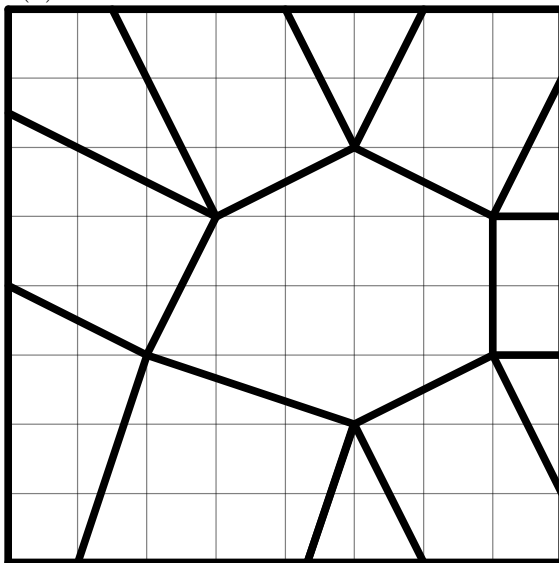
(a) <http://courses.csail.mit.edu/6.849/fall20/psets/ps2-1a.pdf>



(b) <http://courses.csail.mit.edu/6.849/fall20/psets/ps2-1b.pdf>



(c) <http://courses.csail.mit.edu/6.849/fall20/psets/ps2-1c.pdf>



(d) <http://courses.csail.mit.edu/6.849/fall20/psets/ps2-1d.pdf>

Figure 1: Crease patterns for Problem 2.1. All vertices lie on a 16×16 grid.

Optional: Is the crease pattern in Figure 2 flat foldable?

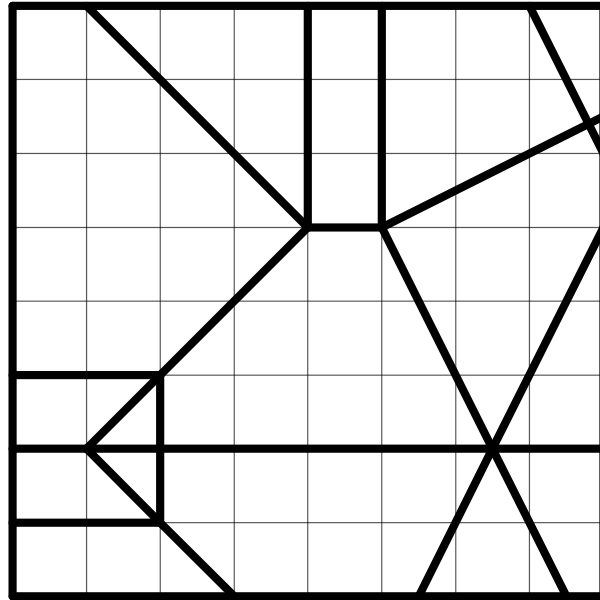


Figure 2: Optional crease pattern for Problem 2.1. <http://courses.csail.mit.edu/6.849/fall20/psets/ps2-1e.pdf>

Problem 2.2 [1D Folding Counterexamples].

- Draw a 1D crease pattern that is mingling (as defined in Lecture 1) but not flat foldable.
- Draw a folded state (including stacking order) of a 1D crease pattern that cannot be achieved by crimps and end folds.