Math Explorations
April 1, 2014

Quadrilateral Folding

For hw, the class is suppose to do a one cut, meaning to fold the shape until you can cut it in one try, with a specific shape.

Even though I attempted many times, I still wasn't able to get it exactly, but each time I tried I kept getting closer. With a little help and advice from Professor Fleron, I was able to get closer than I have before, but still need to work on it, so I plan to arrange office hours with either professor so I can understand what I'm doing wrong. However, to get some credit, I would like to post what I did, to get as close as I did for a straight cut.

Step 1

Since I ran out of the extra highlighted version handed out in class, I decided to highlight the outline with an orange sharpie to see it better when folding. I also decided to label the sides, where the angle bisectors will be present with points ABC
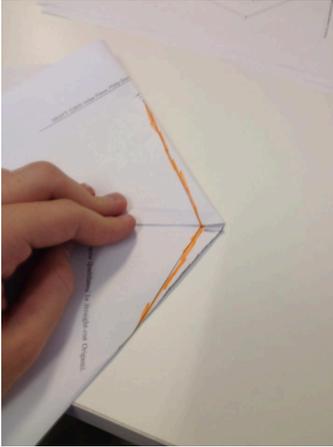
Step 2
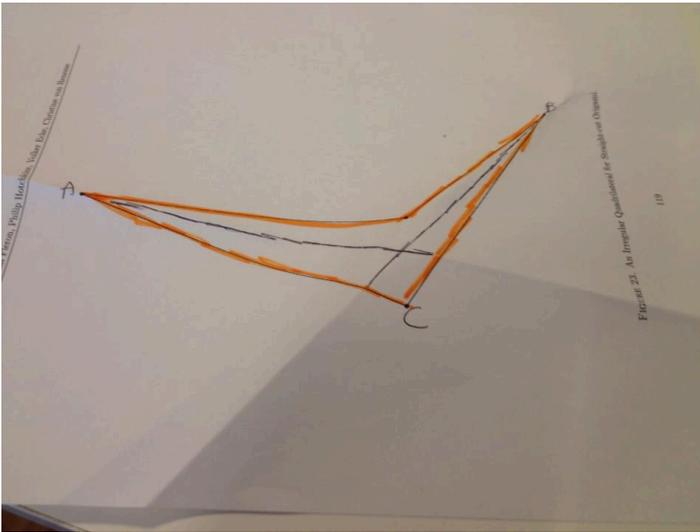
For the next step, I found the angle bisectors, Professor Julian helped by pointing out that there is no angle bisector above point C (which was a constant mistake I kept making)

Step 3
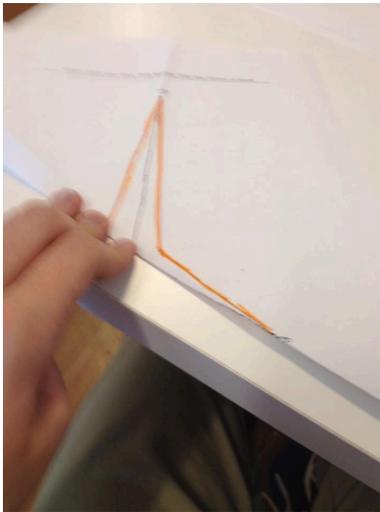
For the next step I took the angle bisector that originated from point b and folded it.

Step 4

Then I folded the angle bisector that originated from point a and carefully made sure these two lines met like this.
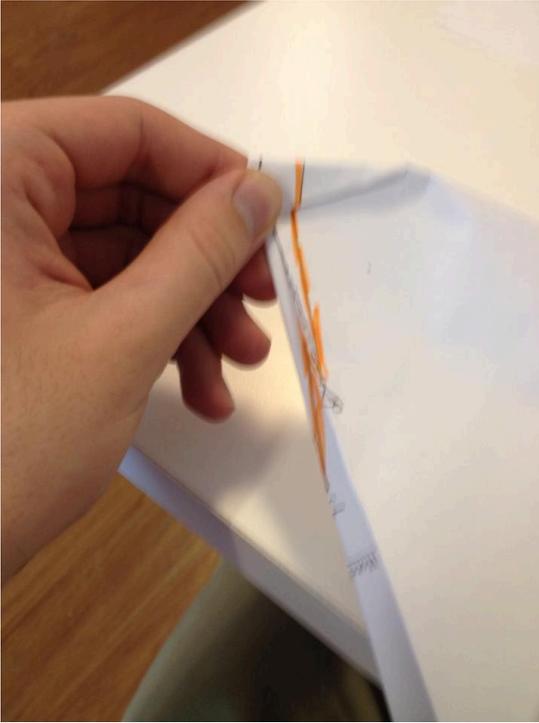

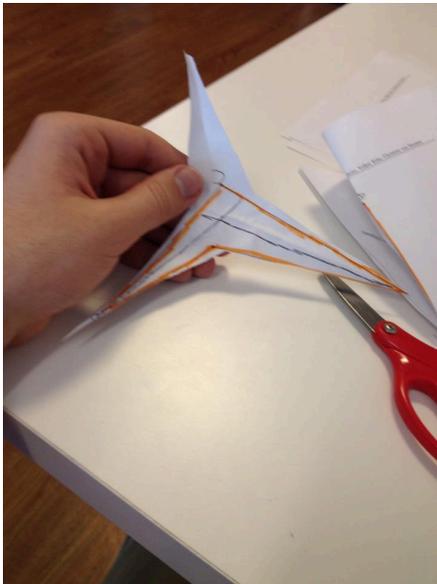This is what the back of the paper looked like

Step 5

I then folded the paper so that the lines on the front met, but the problem is there is still an indent at the bottom.

Step 6

To fix the problem, I folded the indent down to the line, so both sides had a straight line to cut on.

Final result

As you can see, even though most of the sides are cut, the area above c still has paper remaining. Like I mentioned in the beginning, I hope to bring this assignment during either office hours to see what I can improve on.