

## Elementary Folding Moves

*Elementary Folding Move 1:* Given two points A and B, one can fold point A onto point B.

*Elementary Folding Move 2:* Given two points A and B, one can fold a line that passes through points A and B.

*Elementary Folding Move 3:* Given two lines L and M, one can fold line L onto line M.

### Proposed Additional Elementary Folding Moves A

2. Given points P and J and line f, one can fold a line that goes through point P and so that point J is folded onto line f.

3. Given a line a, a point B that is on one side of line a, and a Point C that is on the opposite side of line a one can fold point B onto line a so that point C folds onto itself

One group reports: We experimented with several different placements of points B and C and line a [referred to in the proposed EFM #3] and found that all worked, although the move sometimes exceeded the spatial limits of the paper. However, theoretically, the move was always possible.

Another group reports: From working with the dollar bill folding lab we have found that these two EFM's work to create the dollar bill fold we are all familiar with. We attempted to find more, but found that they were all just restating what we had already used, or we used too many specific terms and when simplified they came down to the two already proposed moves. This is because the dollar bill folding mainly consists of fold a point onto another point in order to get creases (i.e. lines) and then folding points on said lines.

### Proposed Additional Elementary Folding Moves B

1. Given 2 parallel lines (L1 and L2), point A on L1, and point B on L3 (a line intersecting L1 and L2), one can fold point A onto L3 and point B onto L1.