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Three Theorems Accessible to Middle and High School Students Used in Folding a Simple Modular Origami Book.

Mathematical theorems are used to design and fold even simple origami models. In the folding of a Simple Modular Accordion Folded Book of my design, three theorems arising from practical and aesthetic considerations are used. Furthermore, these theorems are accessible to middle and high school students. The first theorem involves folding a square or rectangle in half using opposite edges and avoiding a center crease or pinch. The second is Fold two folds spaced equally around the what would be the center line of a rectangle, without folding a center crease. The third involves a formula for the number of pieces of paper needed to achieve a book of a certain number of pages. (Received September 22, 2015)