

Counter Productivity in Minimalist Origami

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Abstract

In minimalist origami, the folder is restricted to a small number of folds n (typically no greater than 4 or 5) to achieve a desired result. Naturally, most minimalist models are abstract or impressionistic. Traditional origami paper that is colored on one side and white on the other may be used, and the resulting contrast between regions can “paint” the desired image. This technique has been successfully employed to represent the Roman alphabet and numerals, as well as punctuation marks and characters from other alphabets.

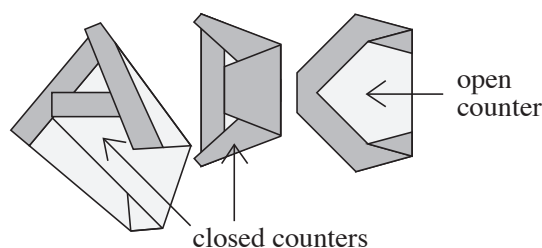


Figure 1: Four Fold ABC

In typographic design, regions of the paper that are completely surrounded by ink, such as the center of the letter “O” are called *counters*. One of the biggest challenges in designing minimalist origami alphabets is producing counters with a small number of folds. While the Roman alphabet contains only one letter with more than one counter (“B”), other writing systems may have significantly more complex characters. This talk addresses the question of how many counters c it is possible to produce with n folds. We will show that for any m , you can create m counters with $3+4m$ folds, and then you can add m counters with each additional fold.