Favorite Foldables

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***Fortune Teller***

1. Begin with a standard sheet of paper (approximately 8.5 ×11 inches seems to work well).
2. In order to obtain our desired result of a square, label the vertices of the rectangle $A, B, C, $and $D$ as in Figure 1 below. Fold vertex $A$ to segment $BC$ (denoted by $\overbar{BC}$) at point $E$, and unfold, forming triangle $ABF$. Similarly, fold vertex $B$ to segment $AD$ (denoted by $\overbar{AD}$) at point $F$, and unfold, forming triangle $BAE$. Make a crease joining points $F$ and $E$, forming $\overbar{FE}$, and cut along this segment, forming the square $ABEF$, discarding rectangle $FECD$. $I$ is the center of the square.

**Figure 1**

1. Fold vertex $A$ to center $I$ creating crease $\overbar{GH}$, and vertex $E$ to center $I$ creating crease $\overbar{JK}$. Similarly, fold vertex $F$ to center $I$ to create crease $\overbar{JG}$, and vertex $B$ to center $I$ to create crease $\overbar{KH}$. Don’t unfold any creases. Notice that polygon $GHKJ$ creates another square. This is shown in Figure 2.

**Figure 2**

1. Flip the square over and rotate $90°$. Fold vertex $H$ to center $I$ creating crease $\overbar{LO}$, and vertex $J$ to center $I$ creating crease $\overbar{MN}$. Similarly, fold vertex $K$ to center $I$ to create crease $\overbar{LM}$, and vertex $G$ to center $I$ to create crease $\overbar{NO}$. Don’t unfold any creases. Notice that $OLMN$ creates a similar square. This is shown in Figure 3.



**Figure 3**

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1. Fold $\overbar{OL}$ to $\overbar{NM}$. This forms a rectangle. To open lift pockets E, B, F, A. This is shown in Figure 4.
2. (b)

**Figure 4**

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**Figure 5**