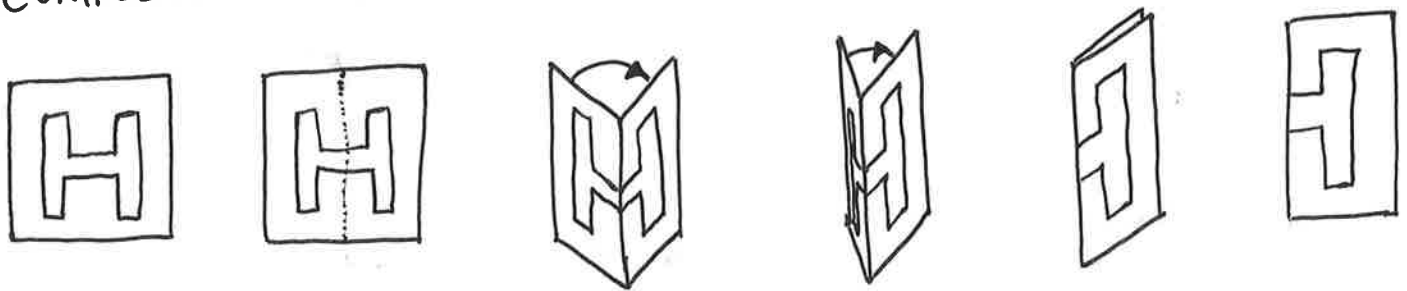


# SYMMETRY!

A SHAPE OR FIGURE HAS A LINE SYMMETRY WHEN FOLDING ON THAT LINE CAUSES THE FIGURE TO LIE COMPLETELY UPON ITSELF.



CUT OUT THE SQUARES BELOW, AND FOLD EACH SQUARE IN SUCH A WAY THAT WITH ONE PUNCH, YOU CAN PUNCH THROUGH BOTH CIRCLES AT ONCE.



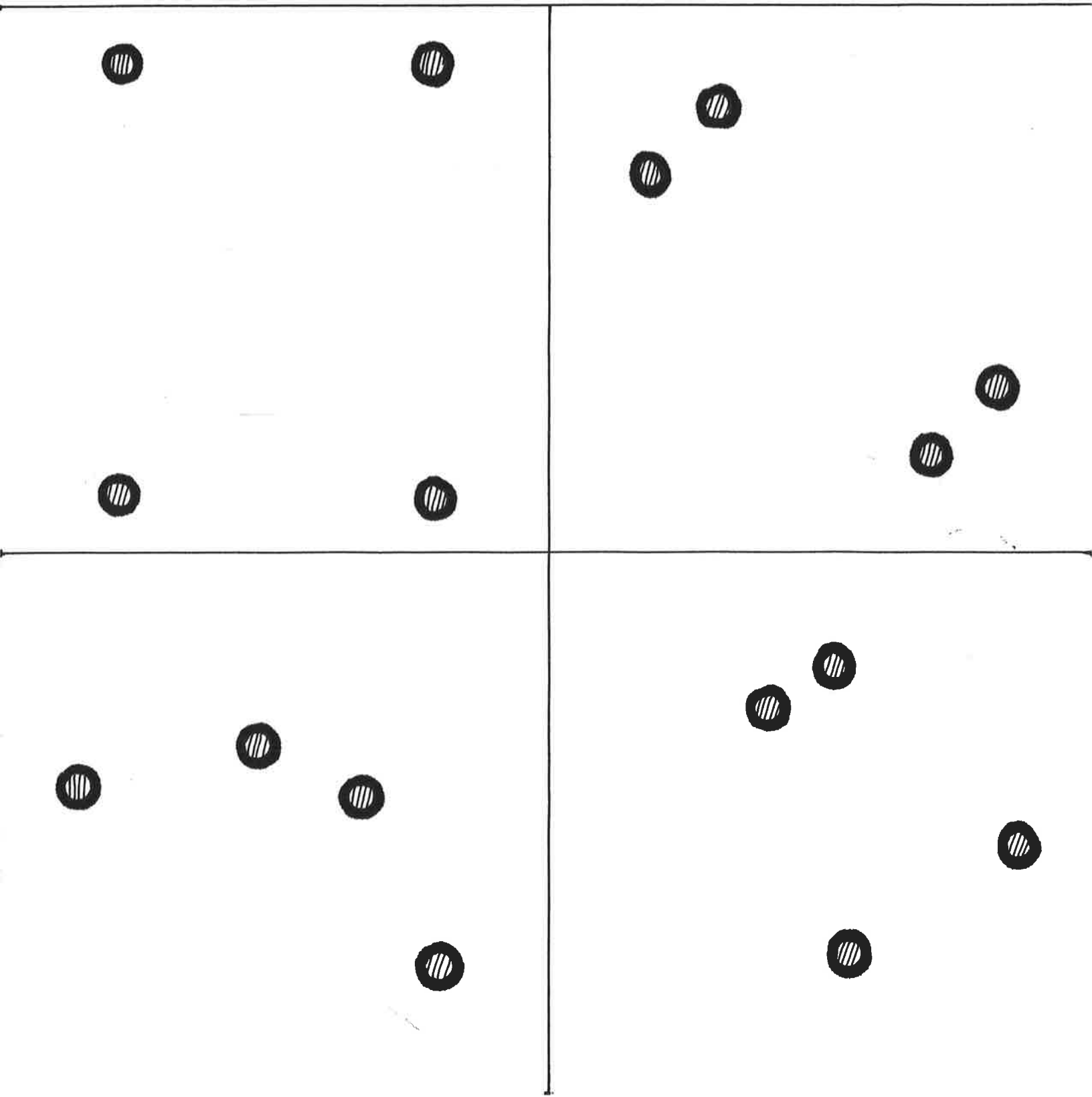
DID YOUR PUNCH  
HIT BOTH  
CIRCLES?



CUT OUT THE SQUARES.

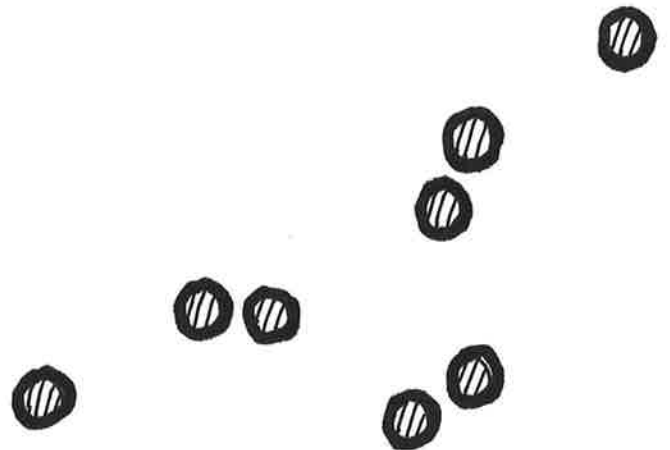
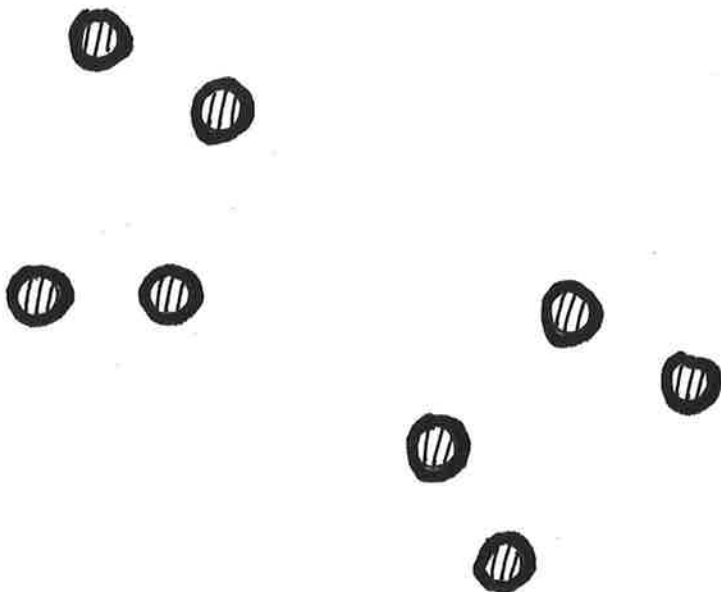
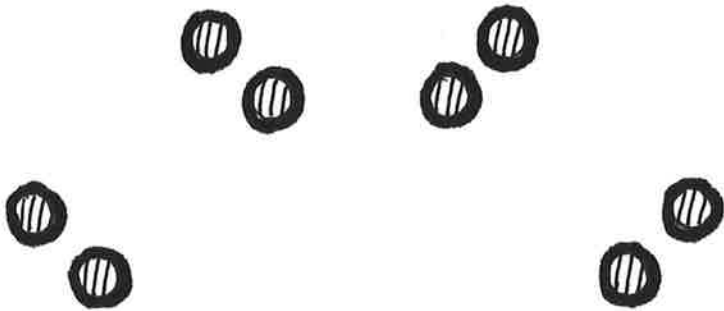
FOLD EACH SQUARE SO THAT WITH ONE PUNCH, YOU CAN MAKE EXACTLY THE PATTERN SHOWN.

DID YOU HIT ALL THE CIRCLES?



THESE PATTERNS WILL REQUIRE MORE FOLDS.

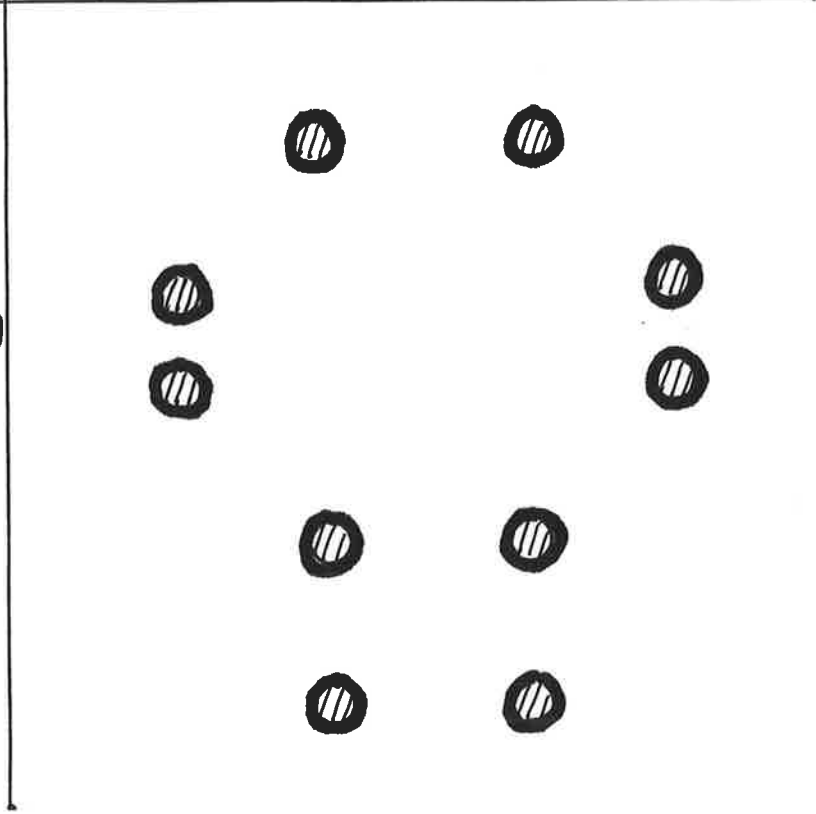
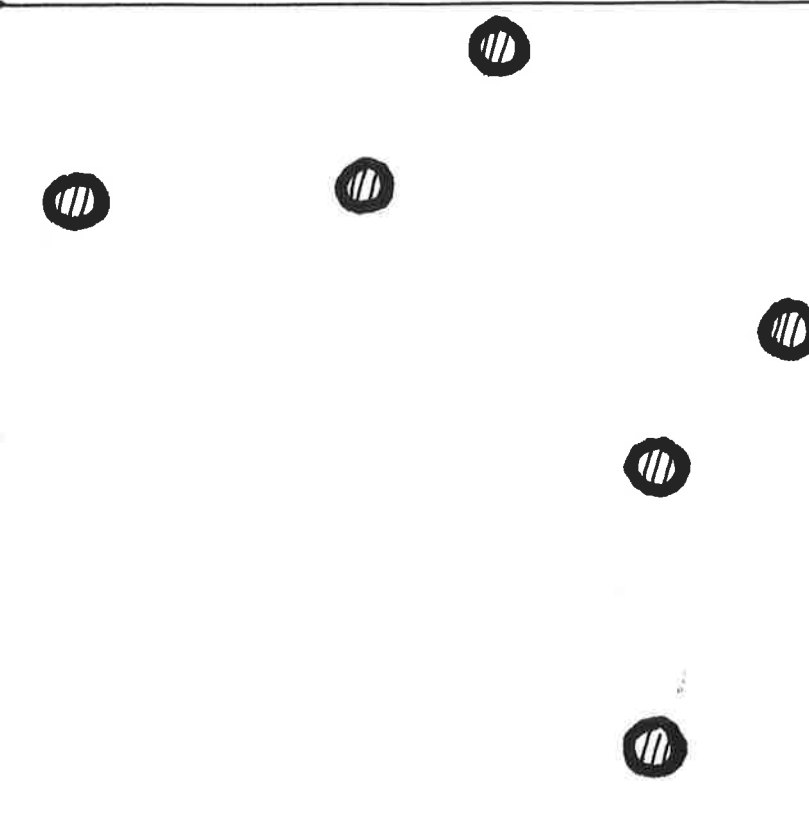
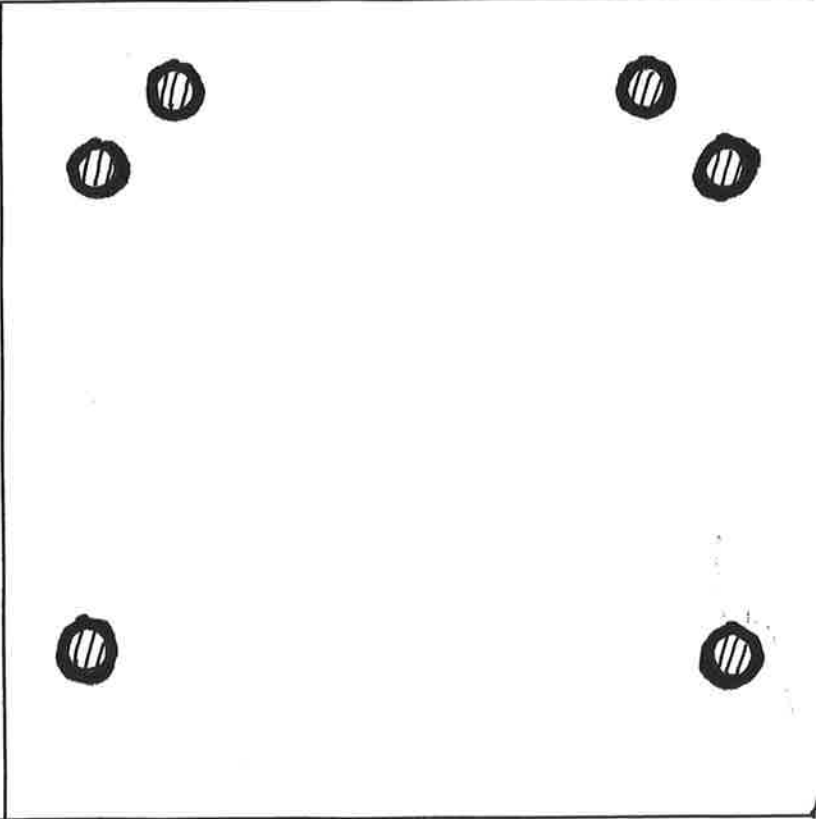
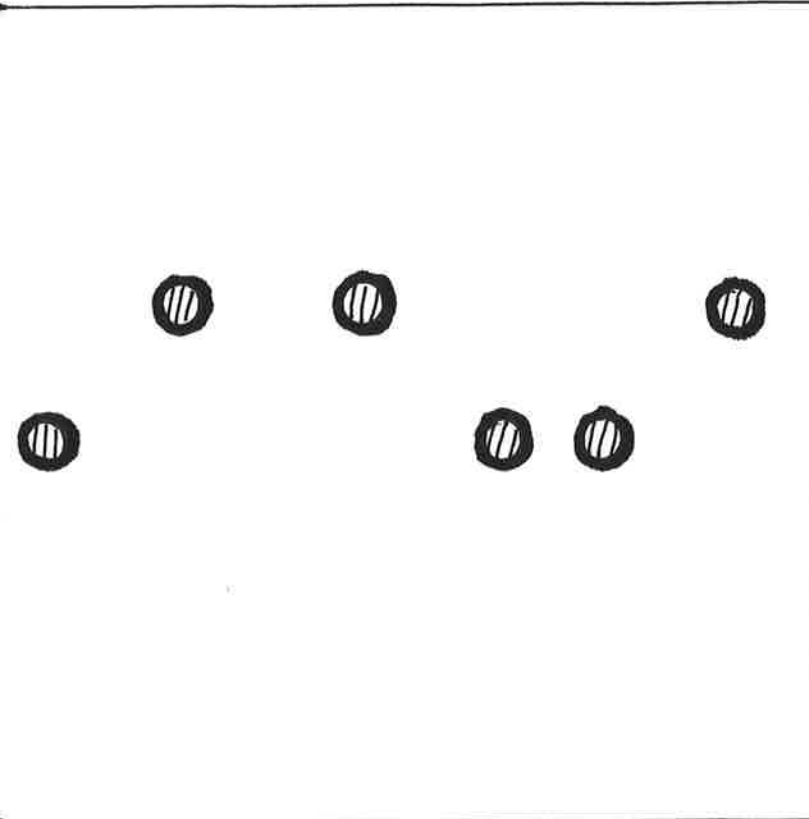
CAN YOU FOLD EACH SQUARE SO THAT ONE PUNCH  
MAKES EXACTLY THE PATTERN SHOWN?



THESE PATTERNS ARE A LITTLE TRICKIER.

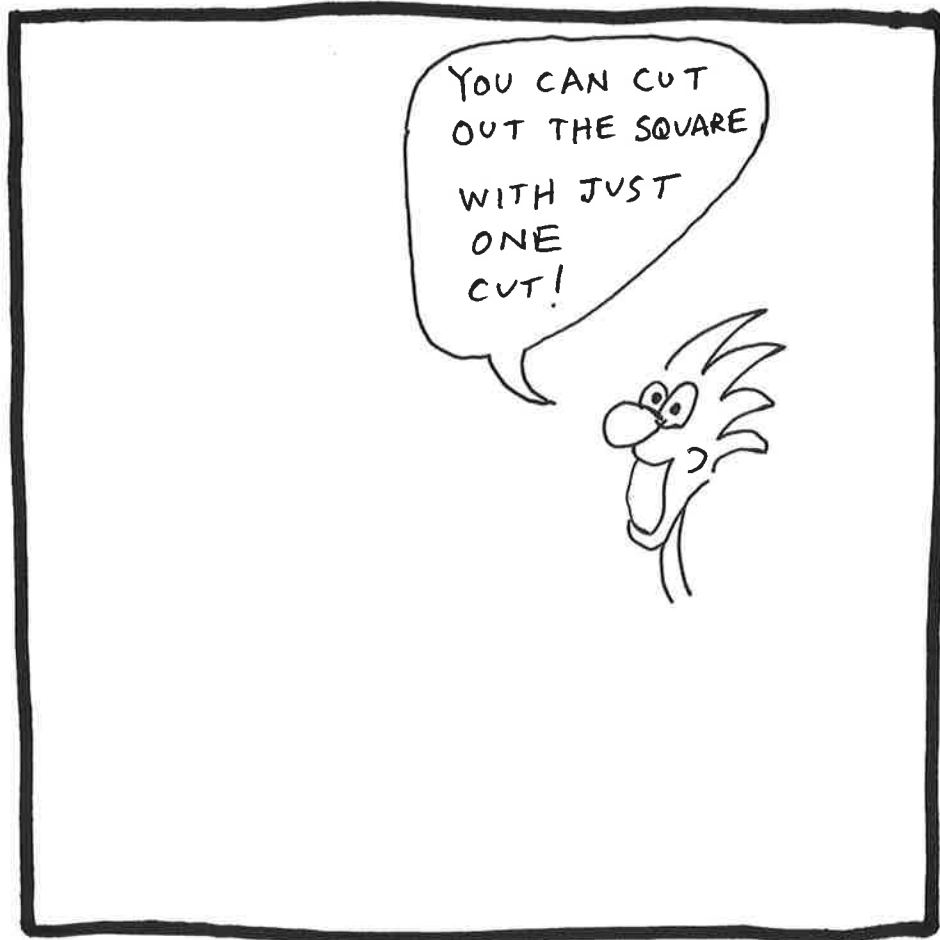
TAKE CARE NOT TO MAKE ANY EXTRA HOLES!

CAN YOU FOLD THE SQUARES AND MAKE ONE PUNCH THAT GENERATES EXACTLY THE PATTERN SHOWN?



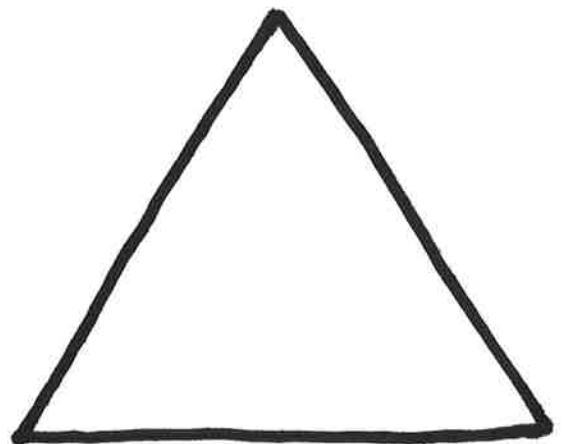
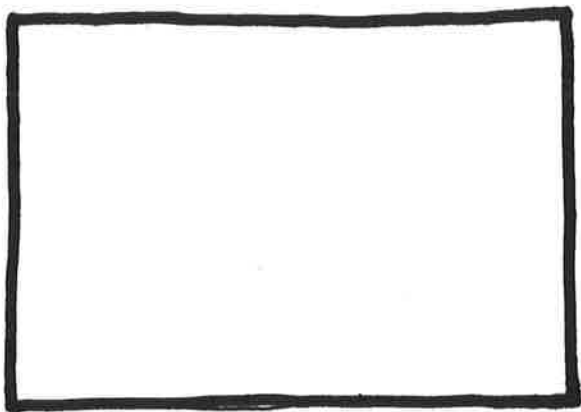
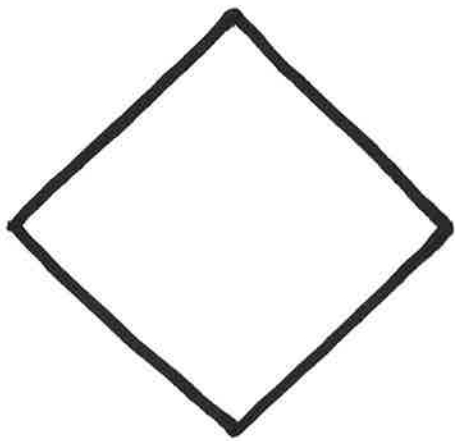
CAN YOU CUT THIS SQUARE OUT OF THE CENTER OF THE PAPER WITH ONLY ONE STRAIGHT CUT?

YES, IT IS POSSIBLE!

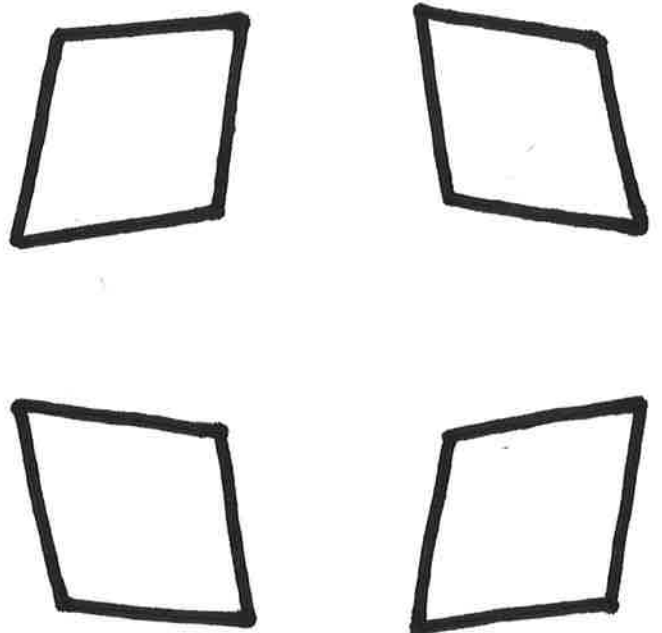
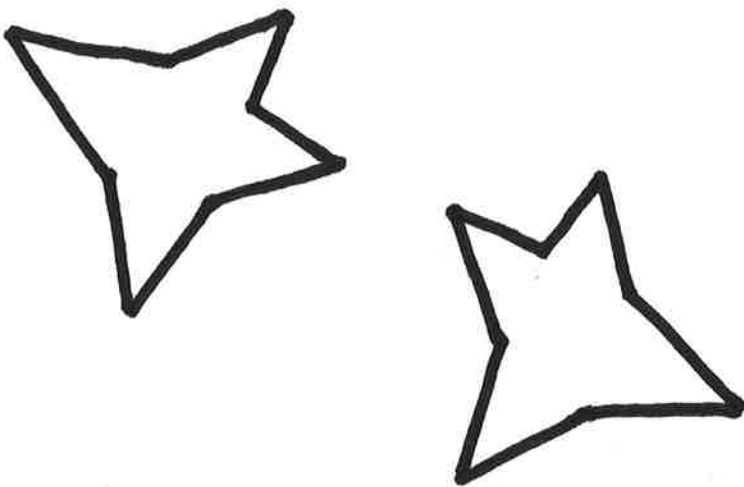
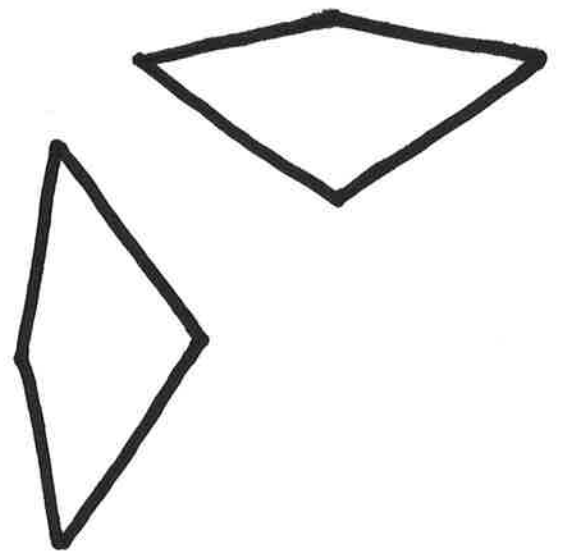
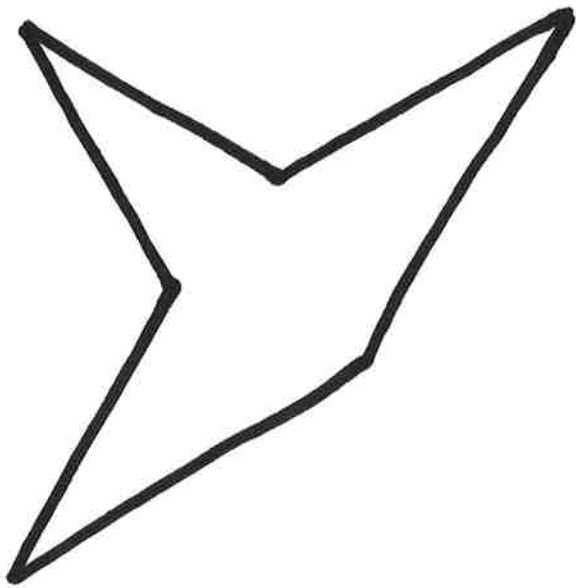


FOLD THE WHOLE SHEET IN SUCH A WAY THAT THE EDGES OF THE SQUARE LIE ON TOP OF EACH OTHER. THEN, WITH ONE CUT, YOU WILL BE ABLE TO CUT OUT THE SQUARE, LEAVING THE FRAME INTACT.

FOLD EACH SQUARE AND MAKE ONE CUT IN SUCH A WAY THAT YOU CUT OUT THE FIGURE, LEAVING THE FRAME INTACT.



FOLD EACH SQUARE AND MAKE ONE CUT IN SUCH A WAY SO AS TO CUT THE FIGURES OUT OF THE CENTER. IT MAY HELP TO FOLD ON LINES OF SYMMETRY.



IT IS A MATHEMATICAL FACT KNOWN AS THE FOLD-AND-CUT THEOREM THAT EVERY FIGURE CONSISTING OF FINITELY MANY STRAIGHT LINES CAN BE MADE IN ONE CUT. INCREDIBLE!

FOLD AND CUT OUT THESE SHAPES WITH ONE CUT.

YOU CAN MAKE EVERY LETTER OF THE ALPHABET — ANY SHAPE AT ALL!

