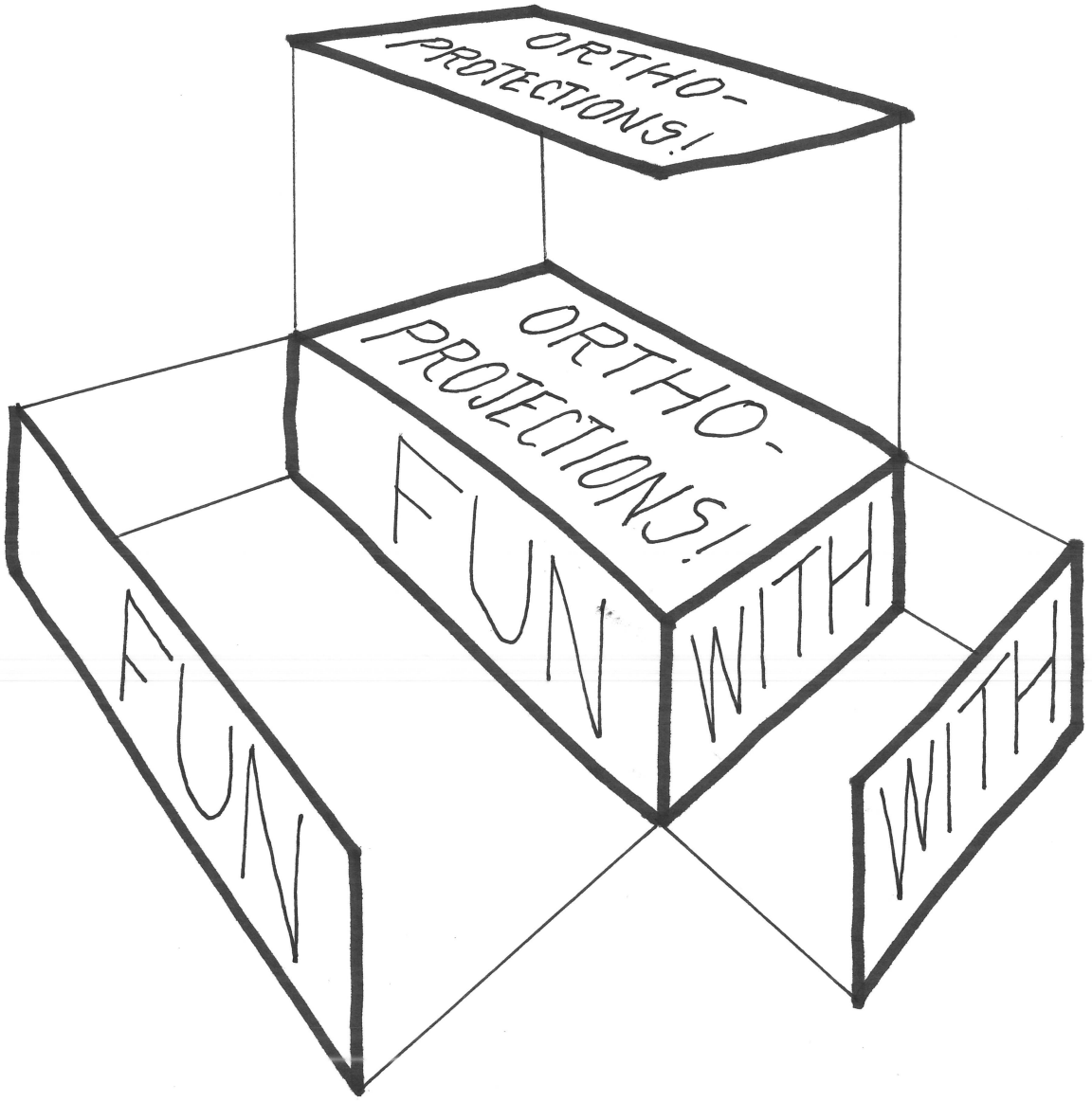
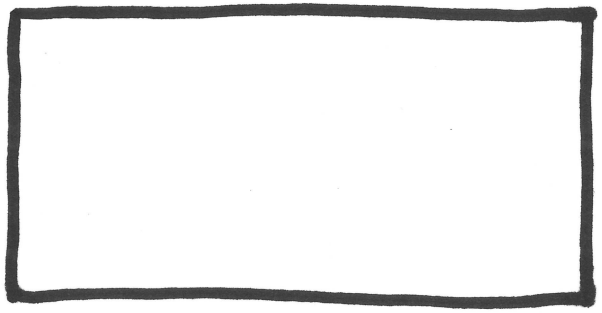


A MATH FOR KIDS
PROJECT

J. D. HAMKINS
JDH.HAMKINS.ORG

A UNIT BLOCK HAS DIMENSIONS $1 \times 2 \times 4$



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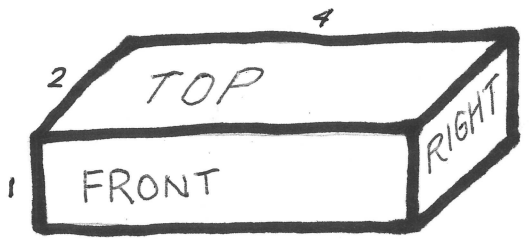
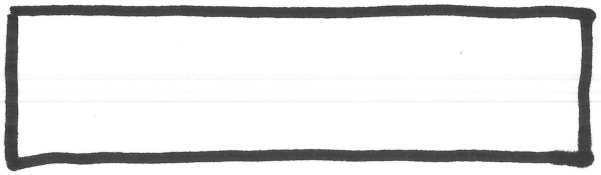


A SINGLE UNIT BLOCK LOOKS LIKE A RECTANGLE FROM THE FRONT, TOP AND SIDE.



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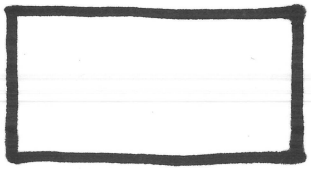
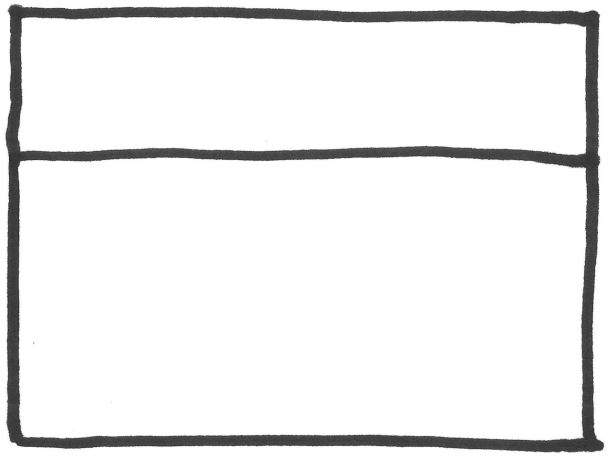


RIGHT

LET'S MAKE ARRANGEMENTS OF UNIT BLOCKS TO REALIZE VARIOUS PROJECTIVE VIEWS.

CAN YOU ARRANGE TWO UNIT BLOCKS SO AS TO REALIZE THESE PROJECTIONS?



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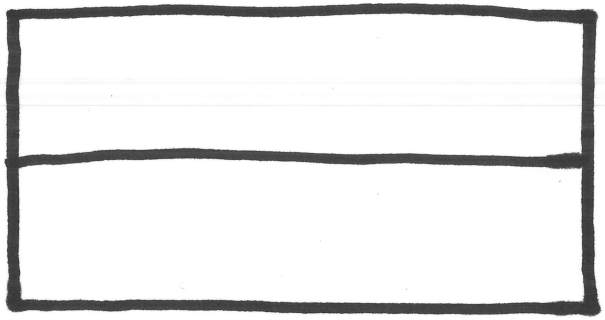

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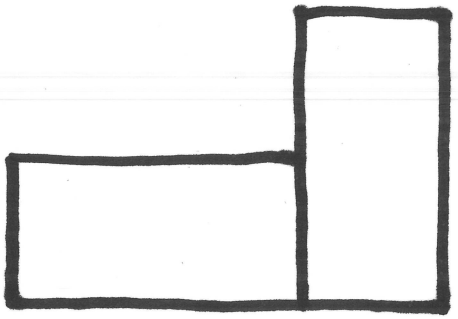

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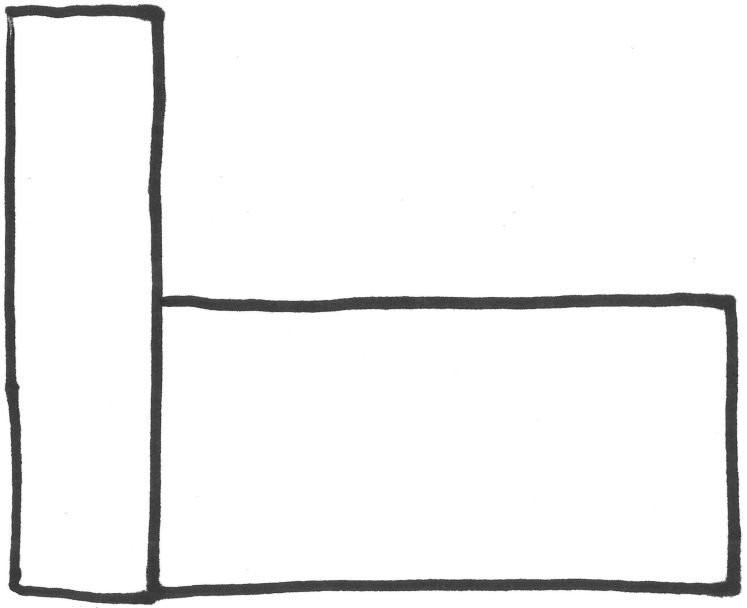
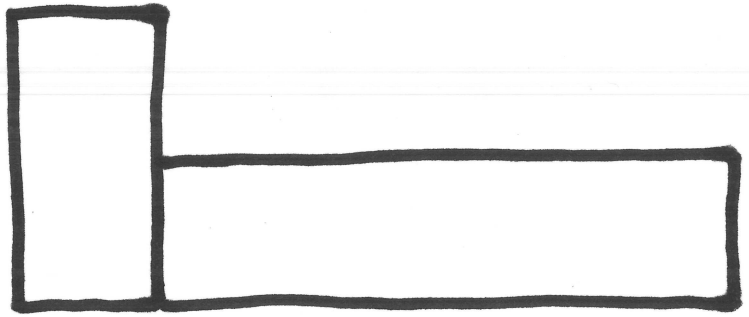


TOP

HERE IS ANOTHER PUZZLE, WITH MORE TO COME ON THE SUBSEQUENT PAGES.



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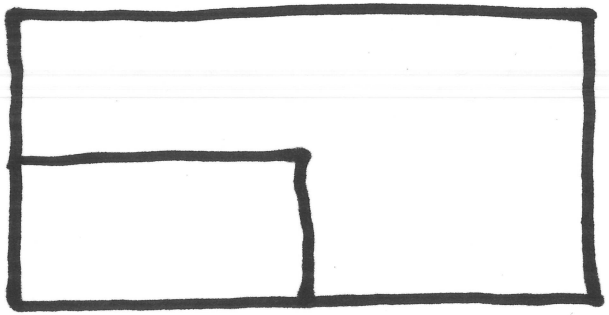

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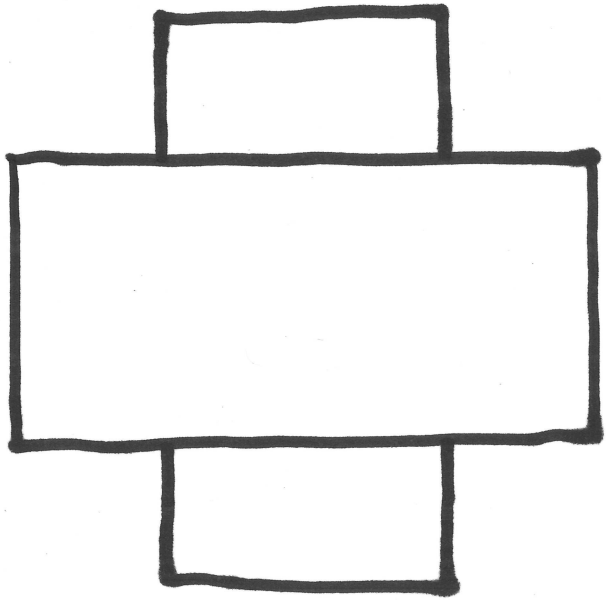

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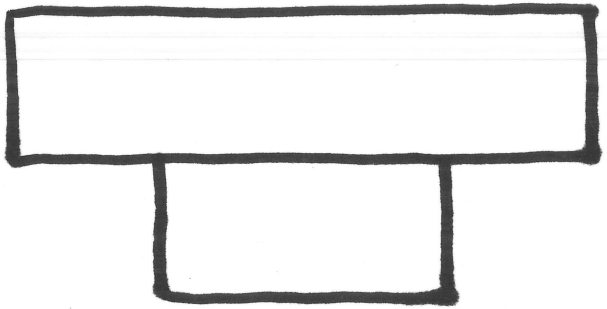

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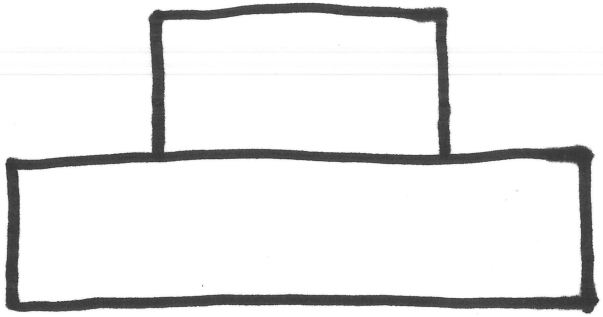

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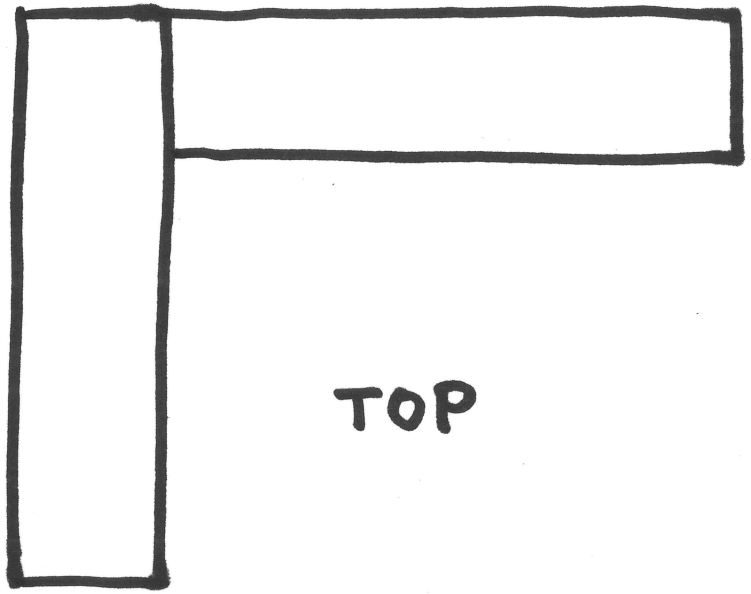

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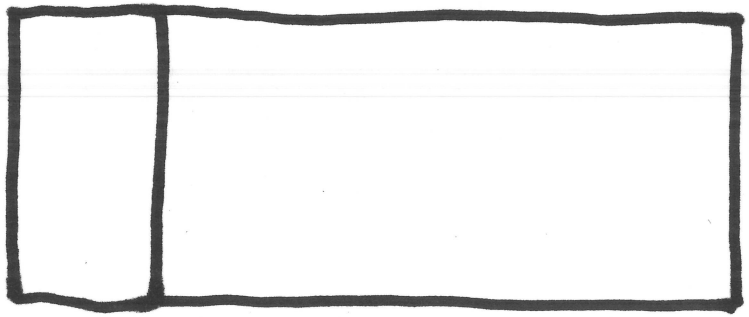

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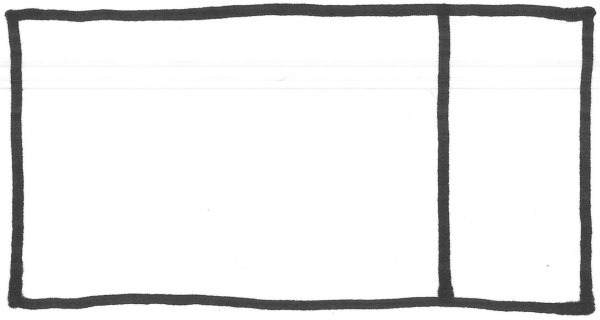

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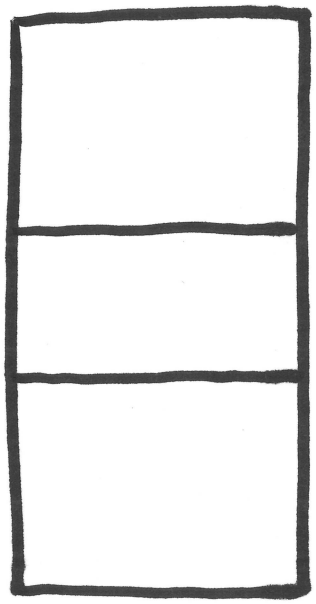

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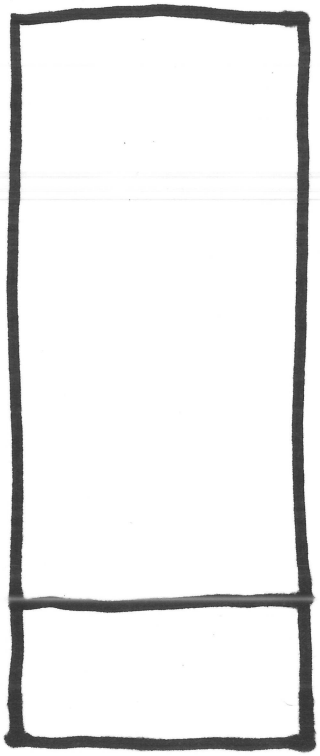

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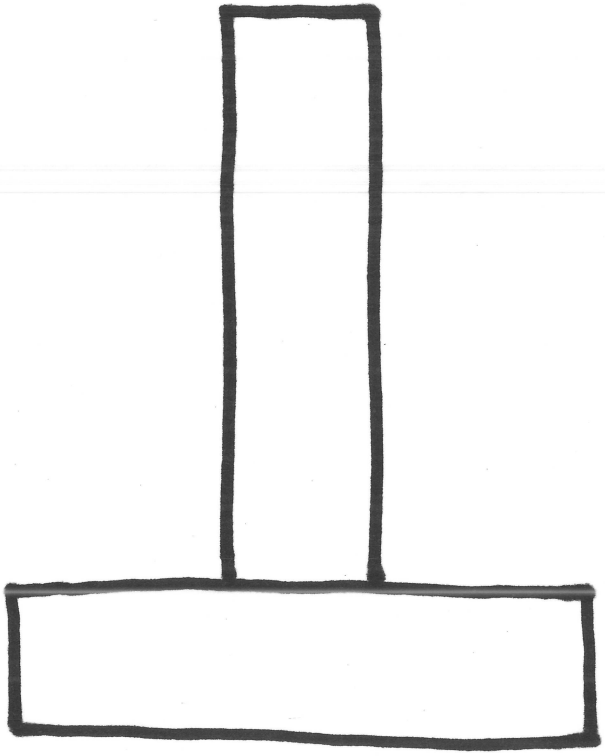
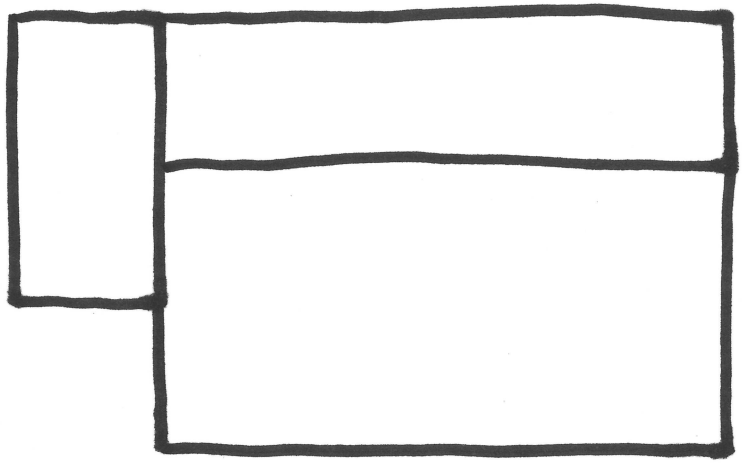


RIGHT

THIS PUZZLE USES THREE BLOCKS.



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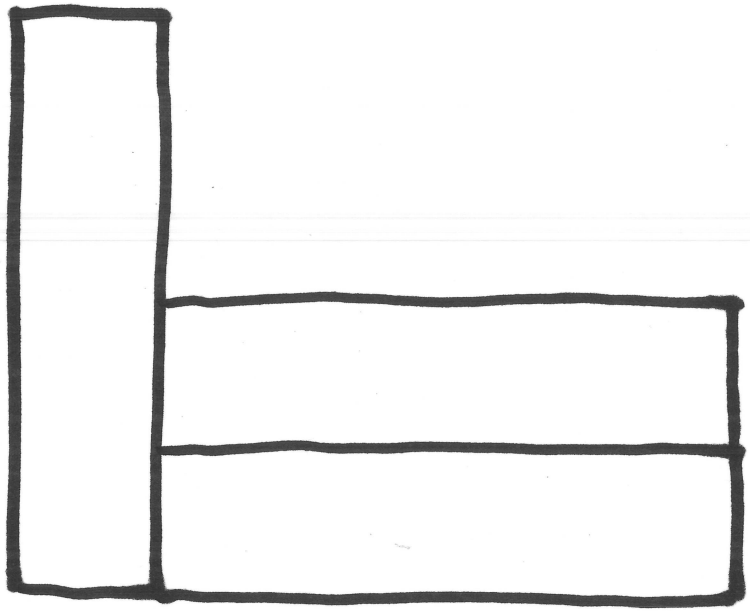

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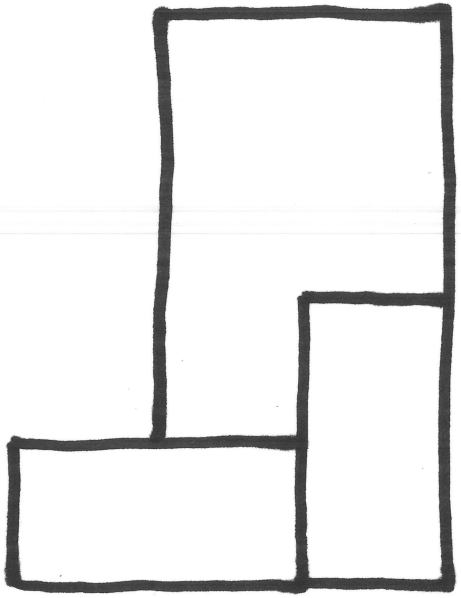

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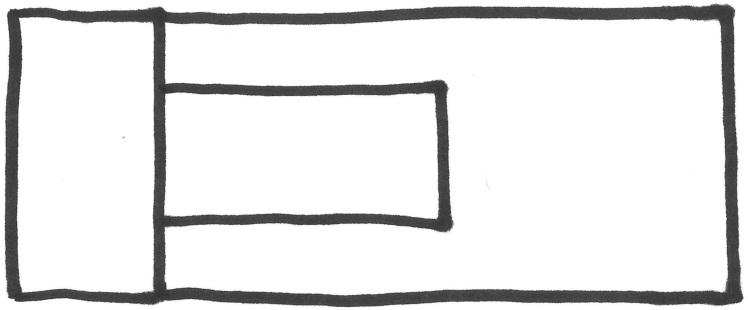

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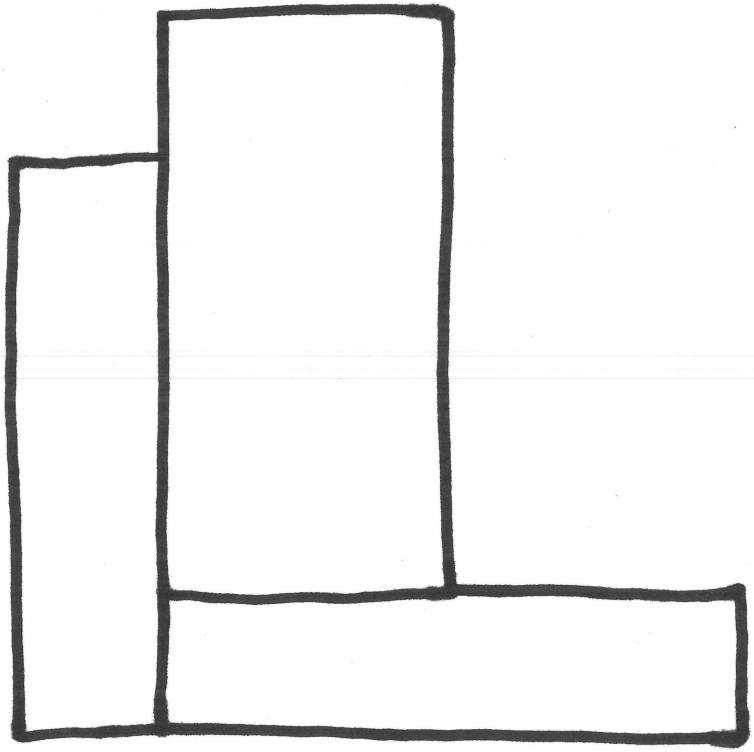

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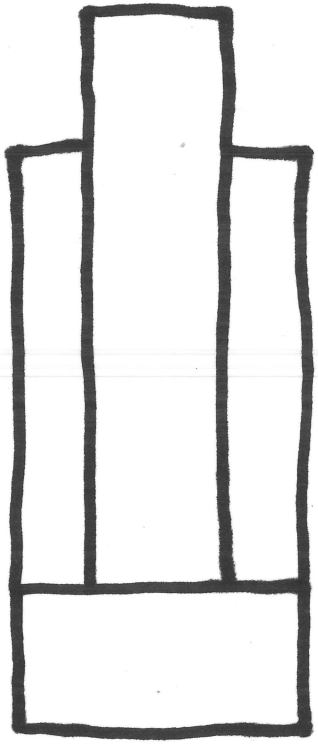

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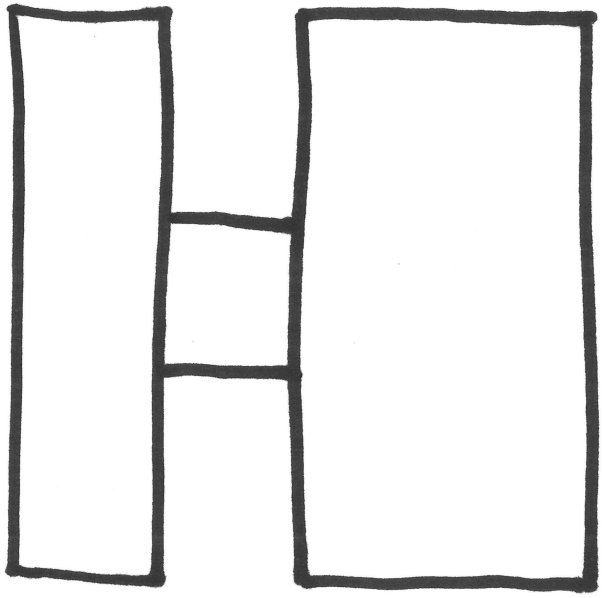

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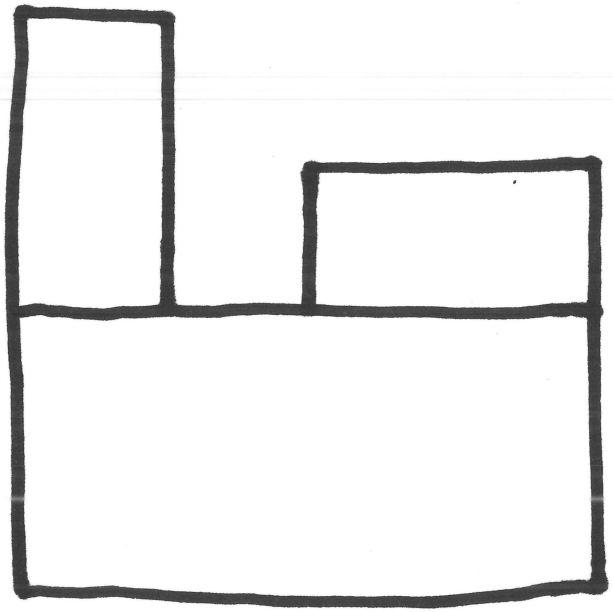

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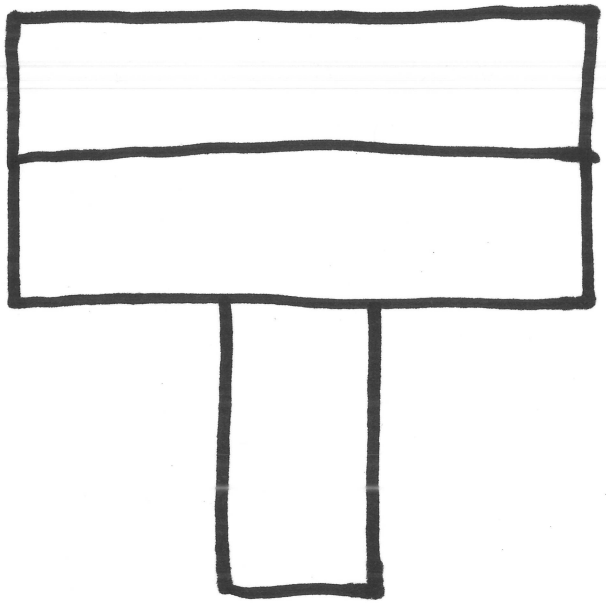

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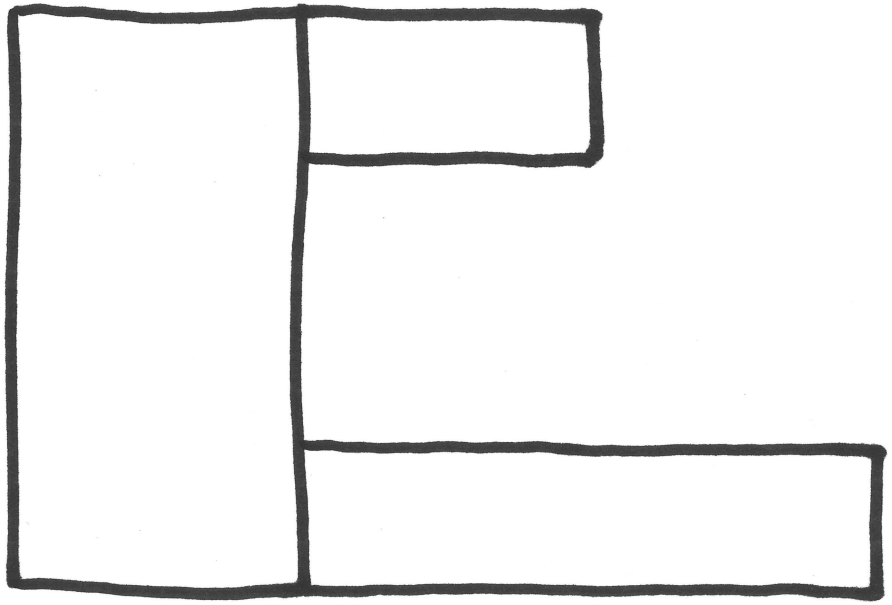

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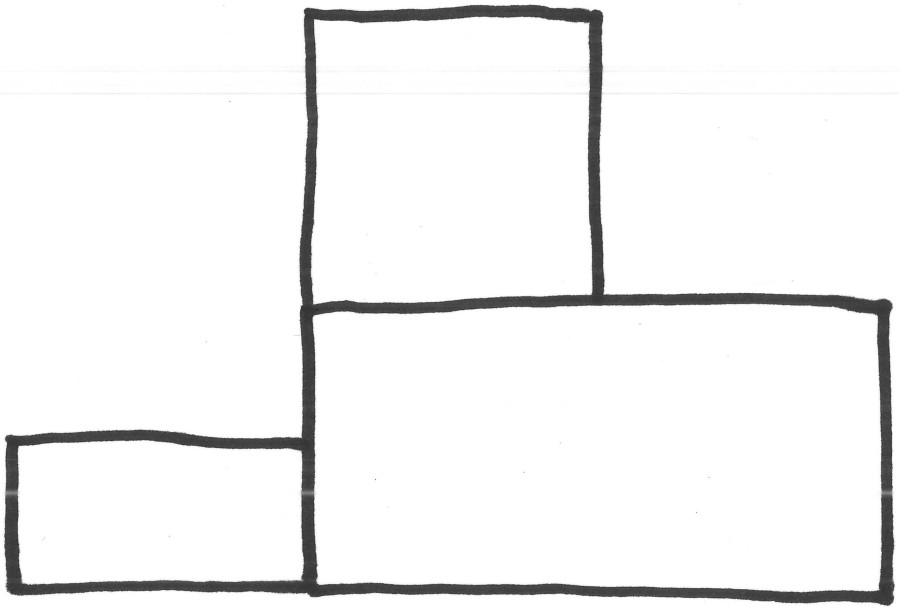

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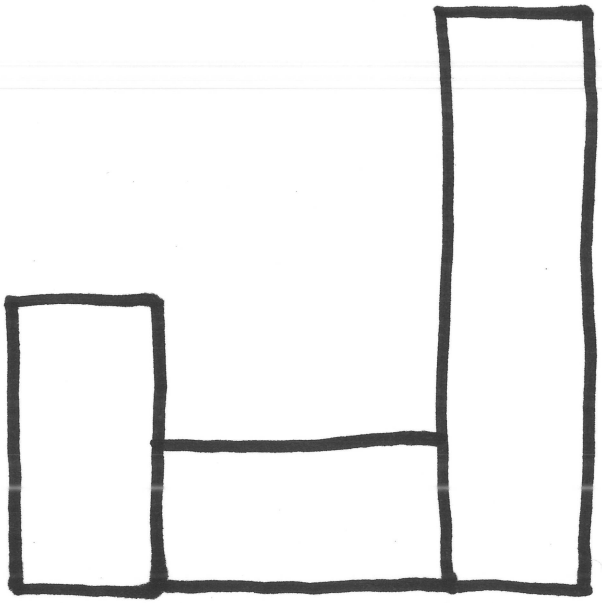

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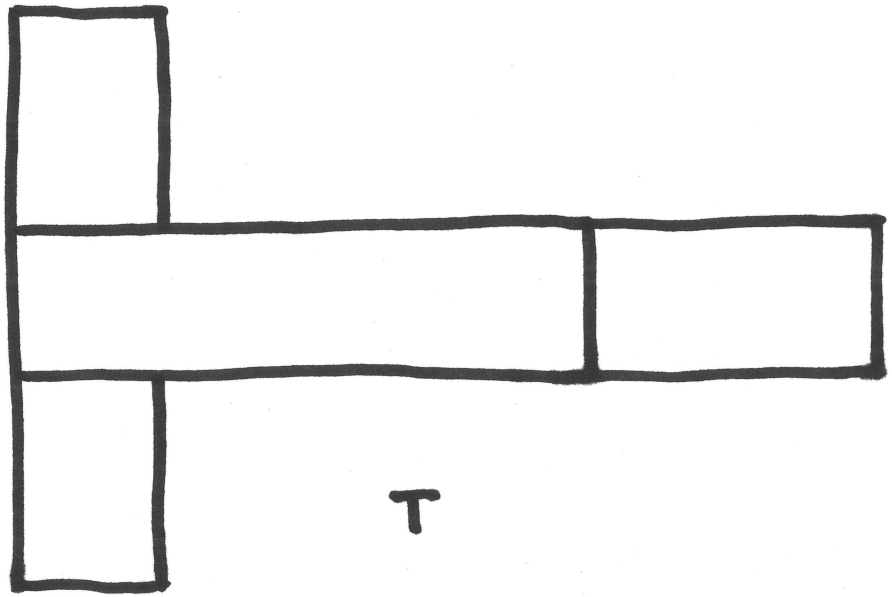

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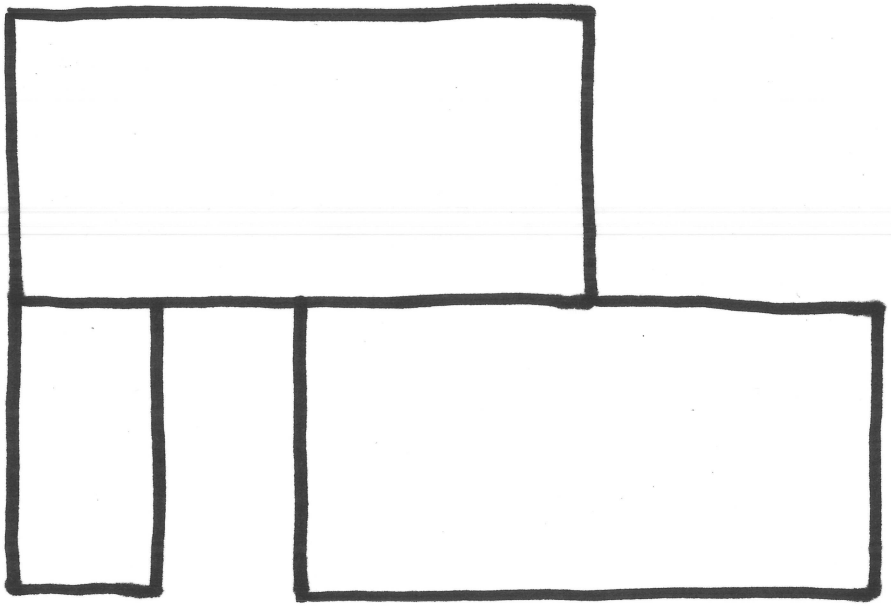

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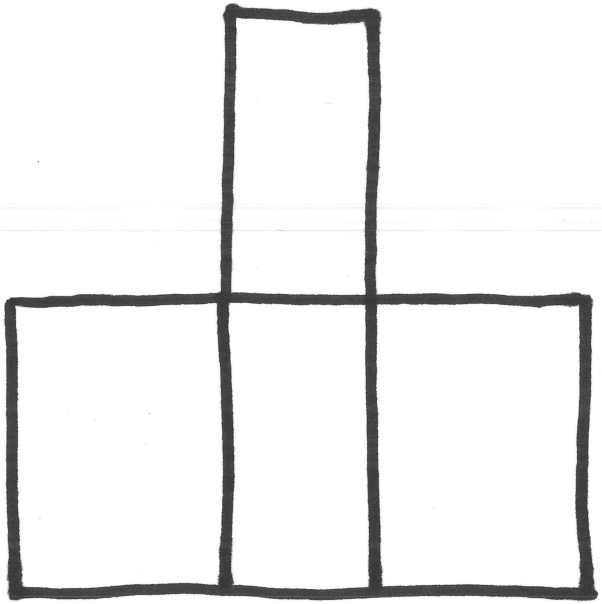

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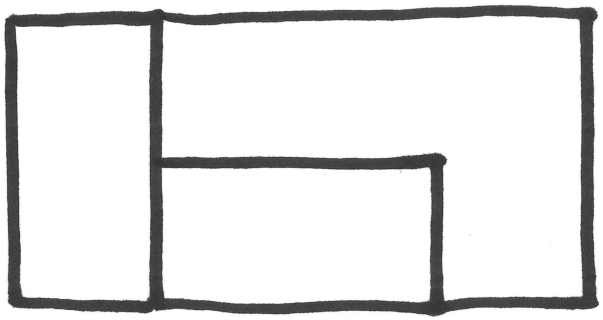

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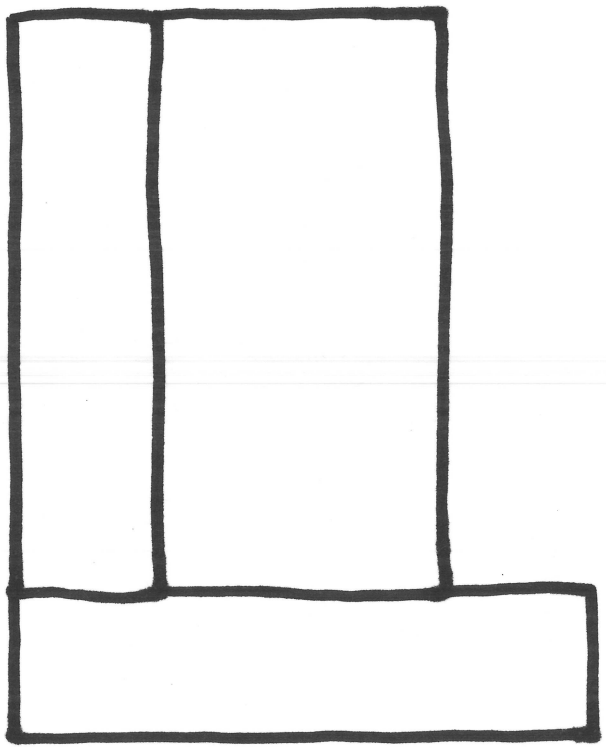

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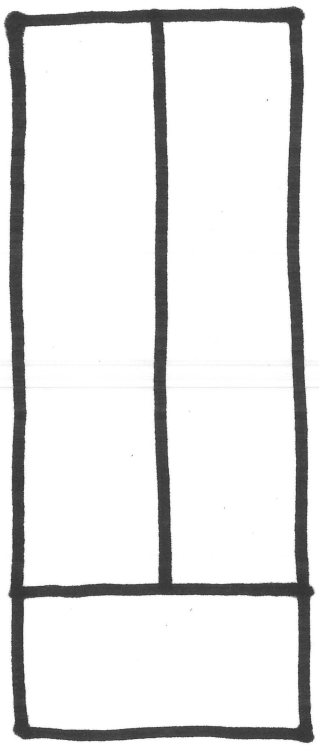

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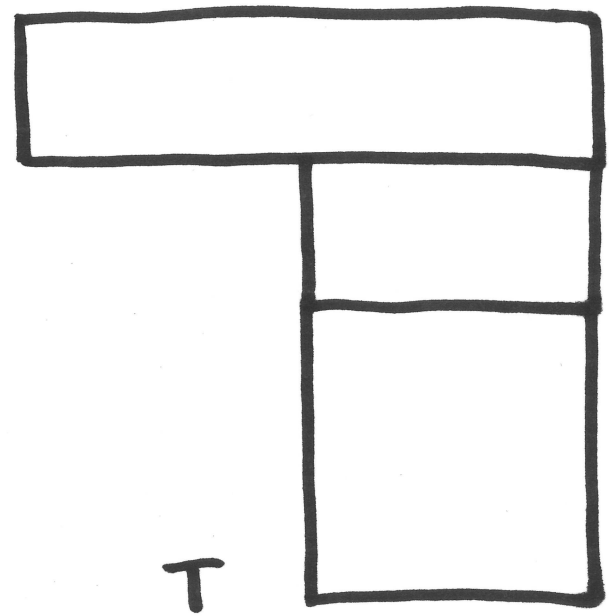
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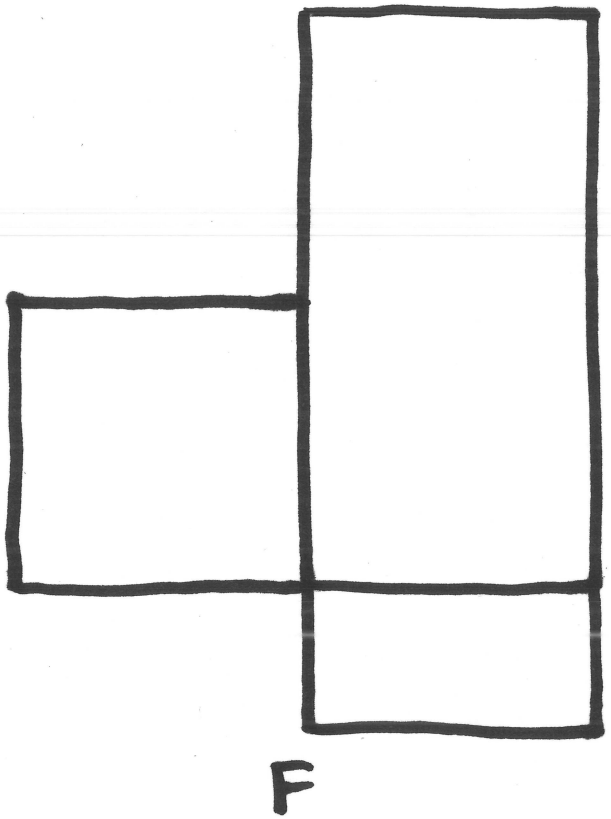
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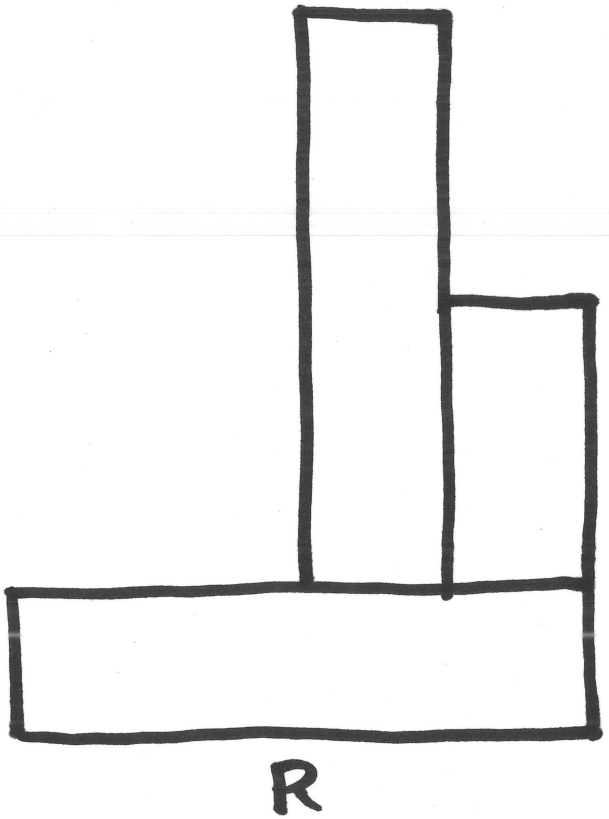
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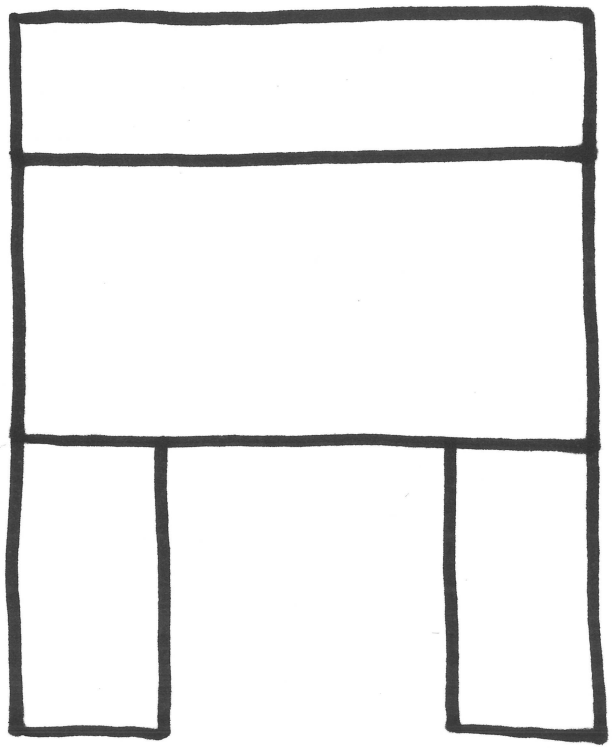

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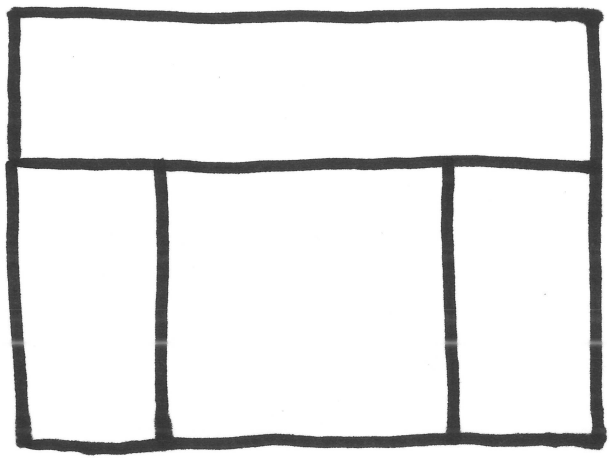

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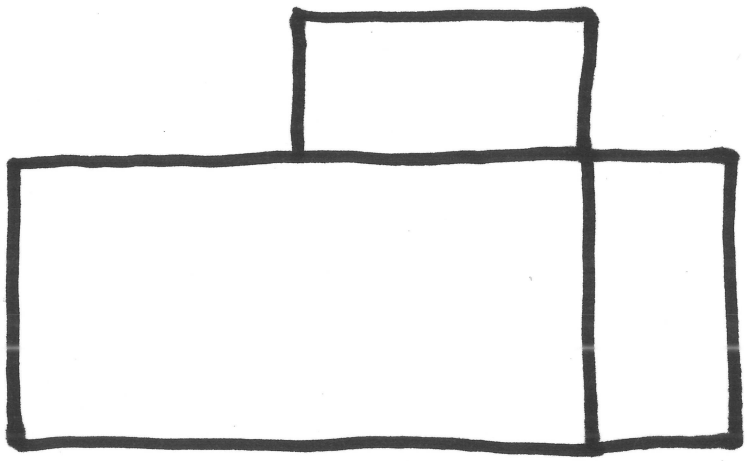
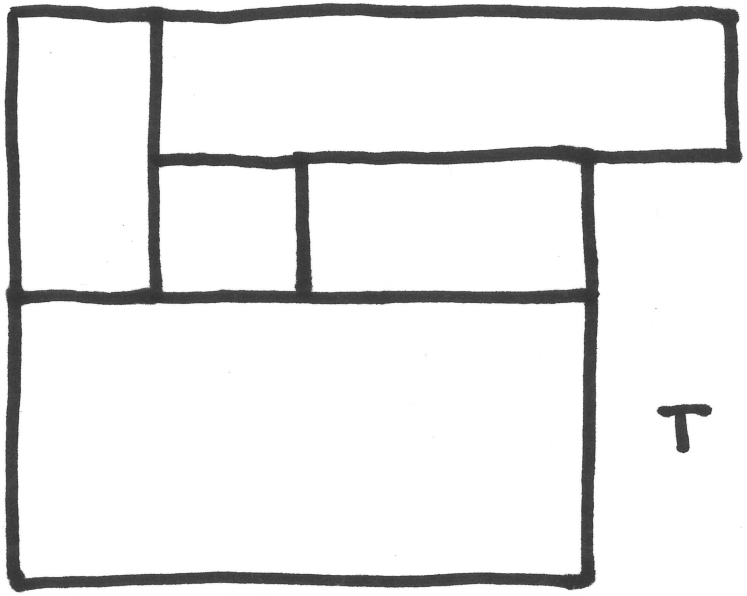


R

FOUR BLOCKS



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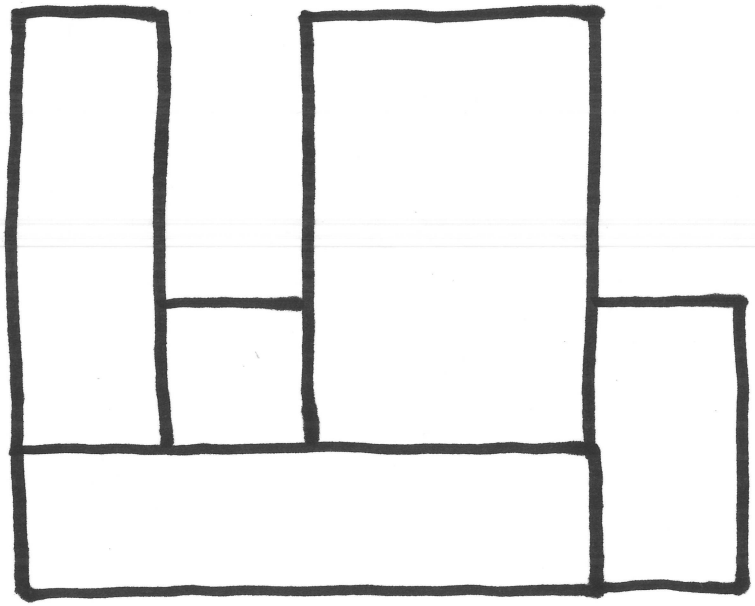

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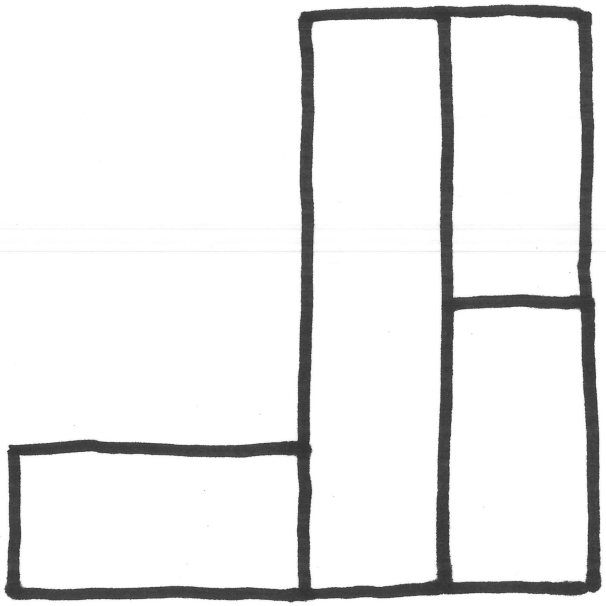

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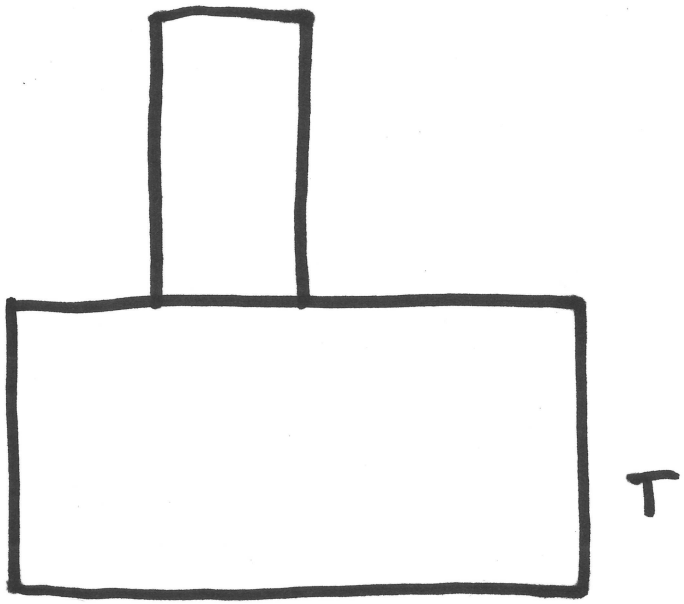

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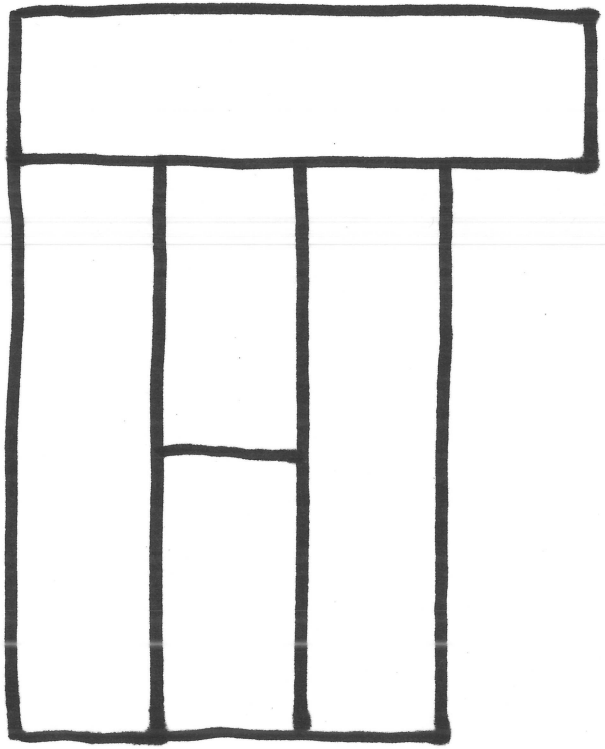

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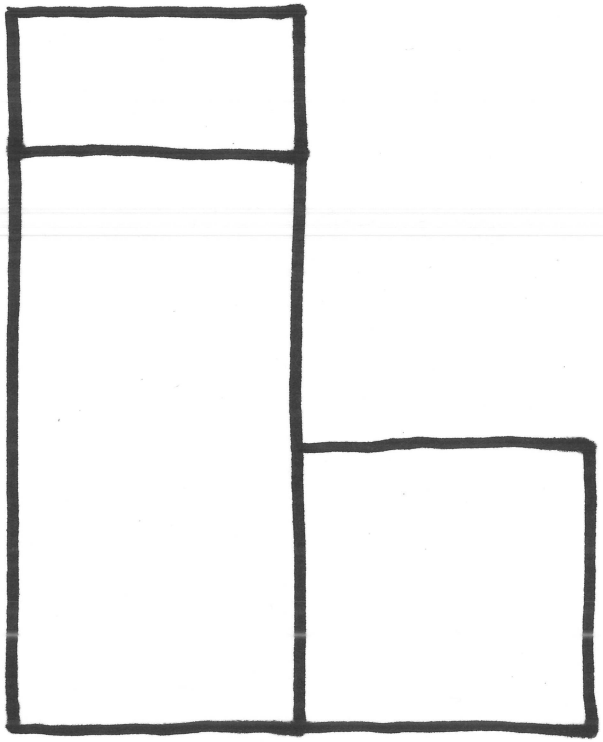

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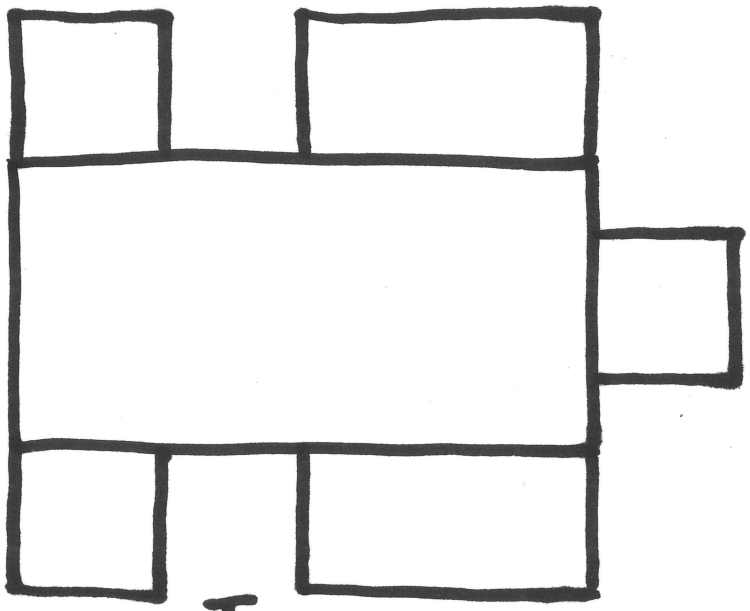
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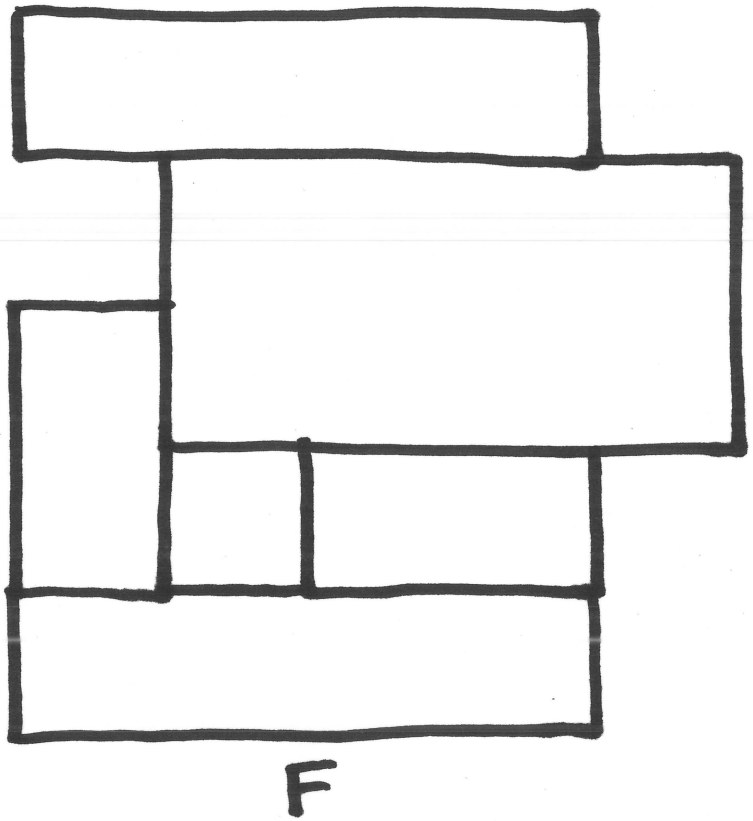
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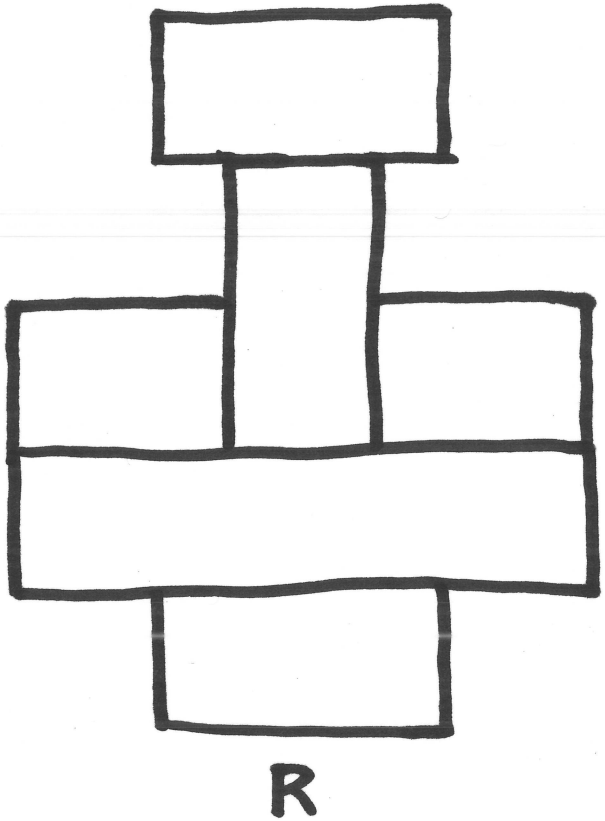
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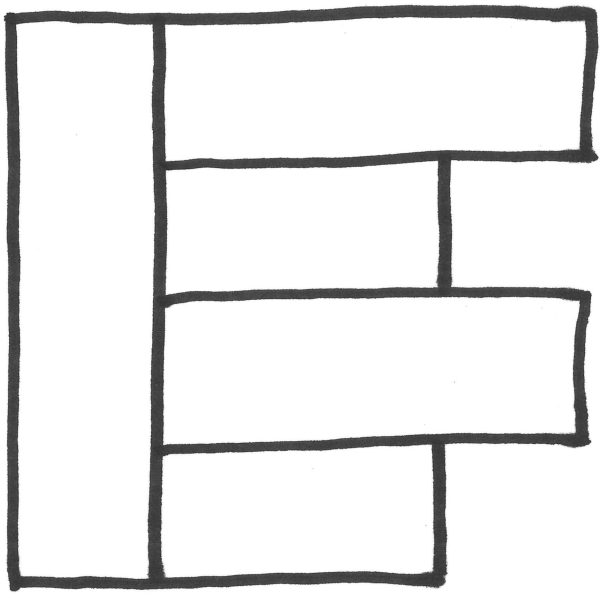

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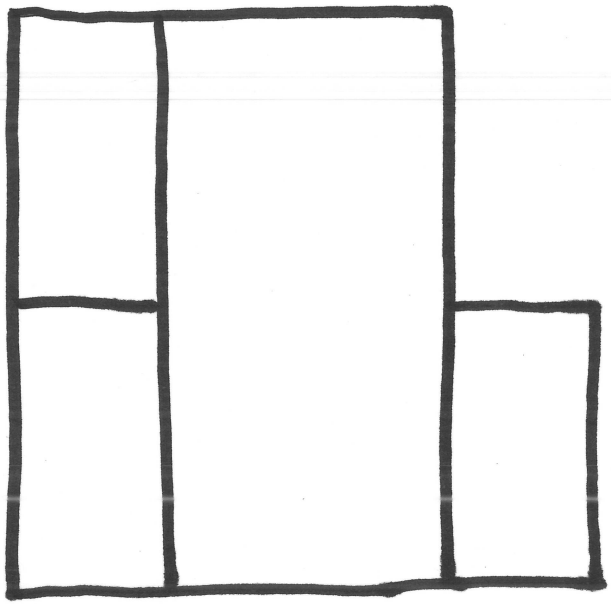

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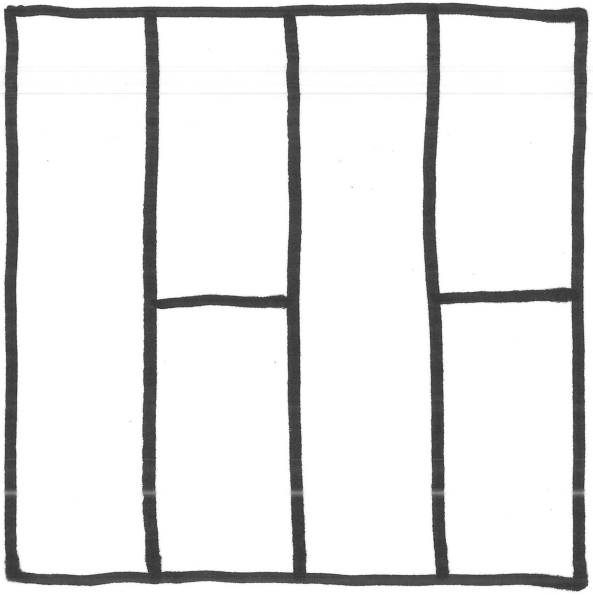

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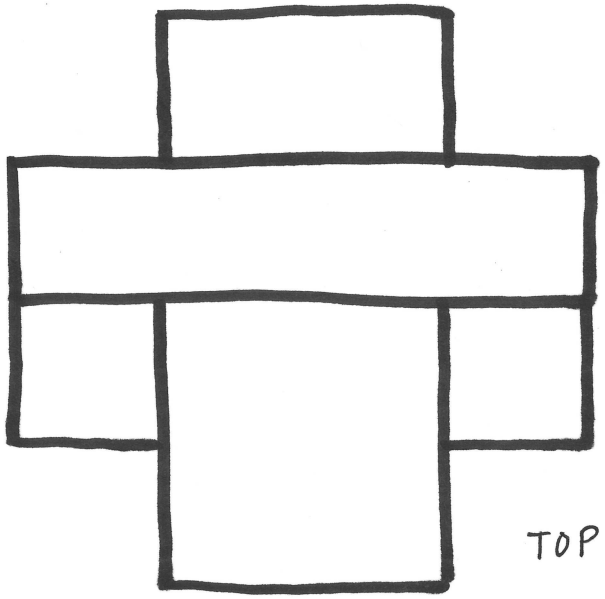

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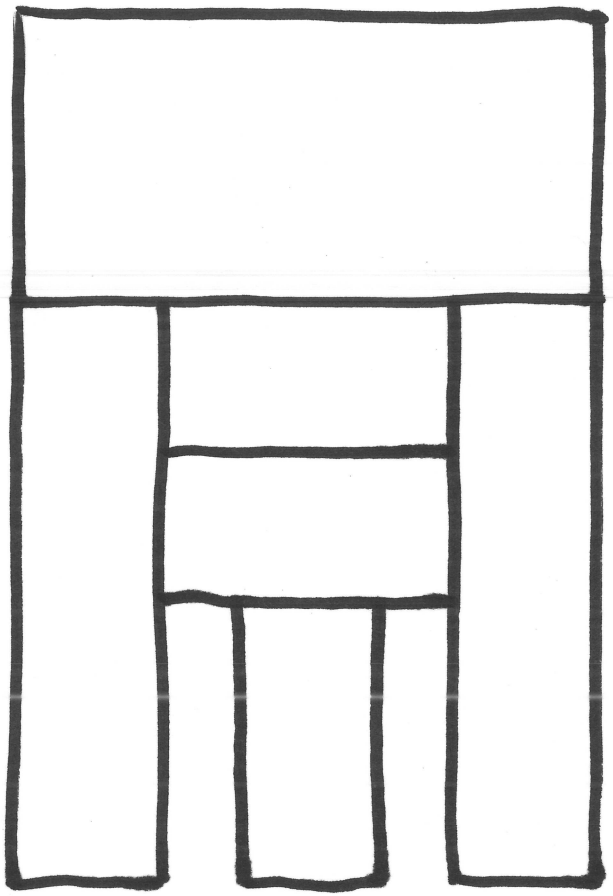

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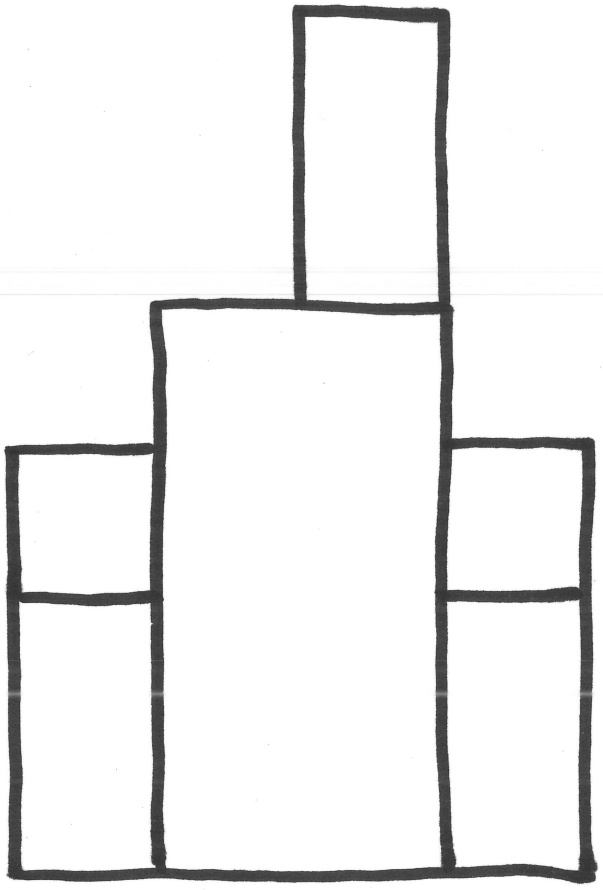
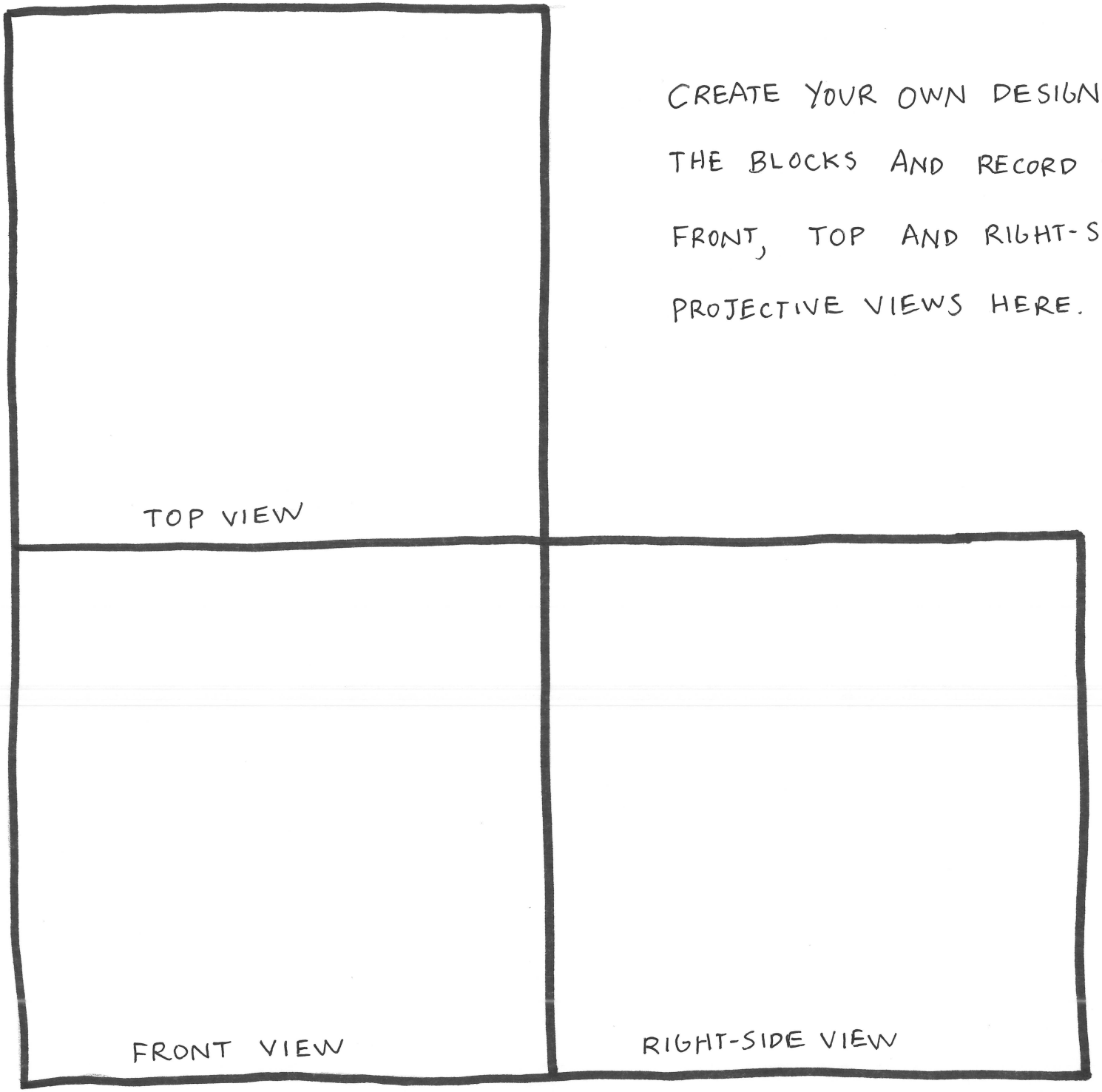
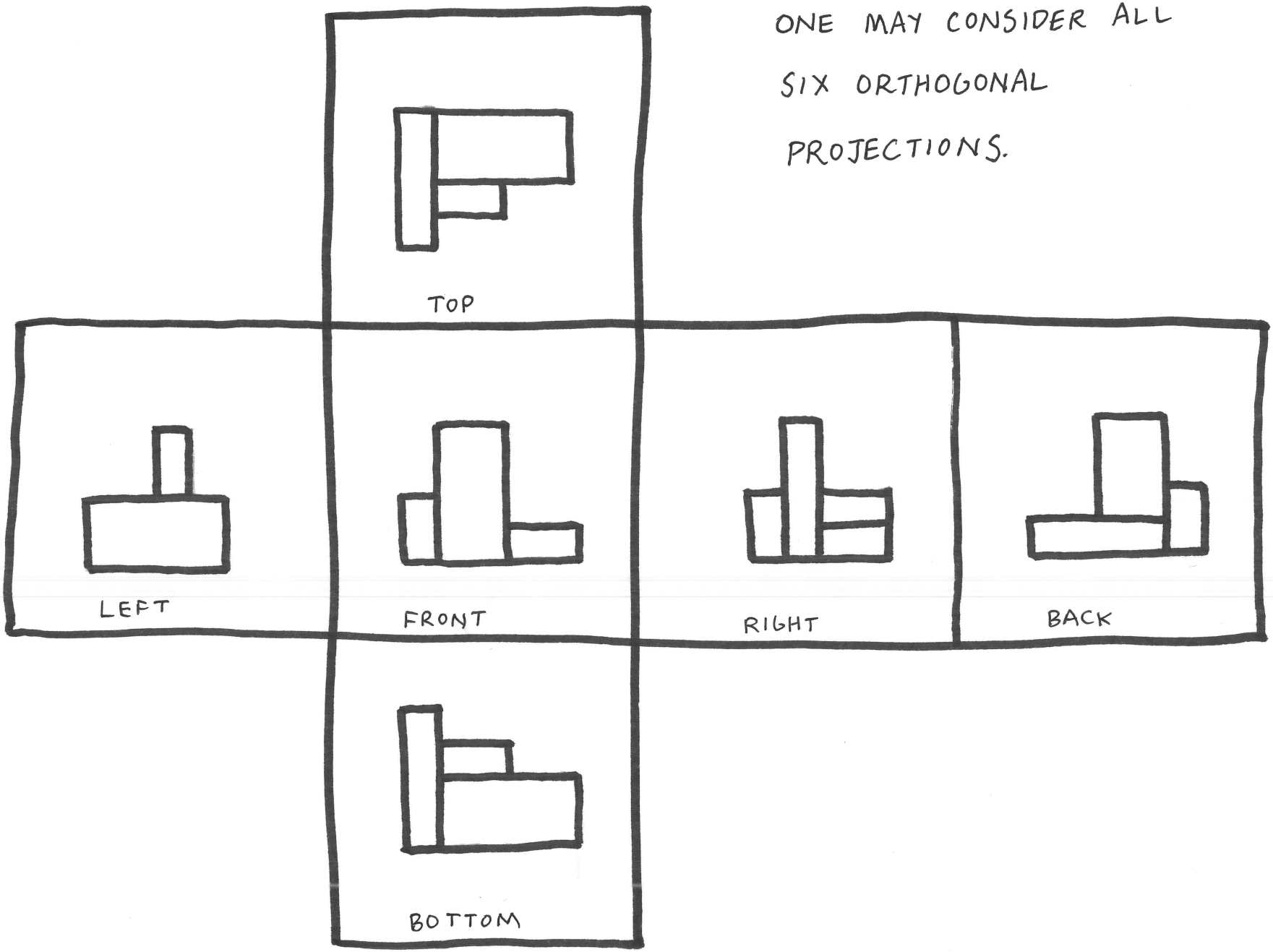


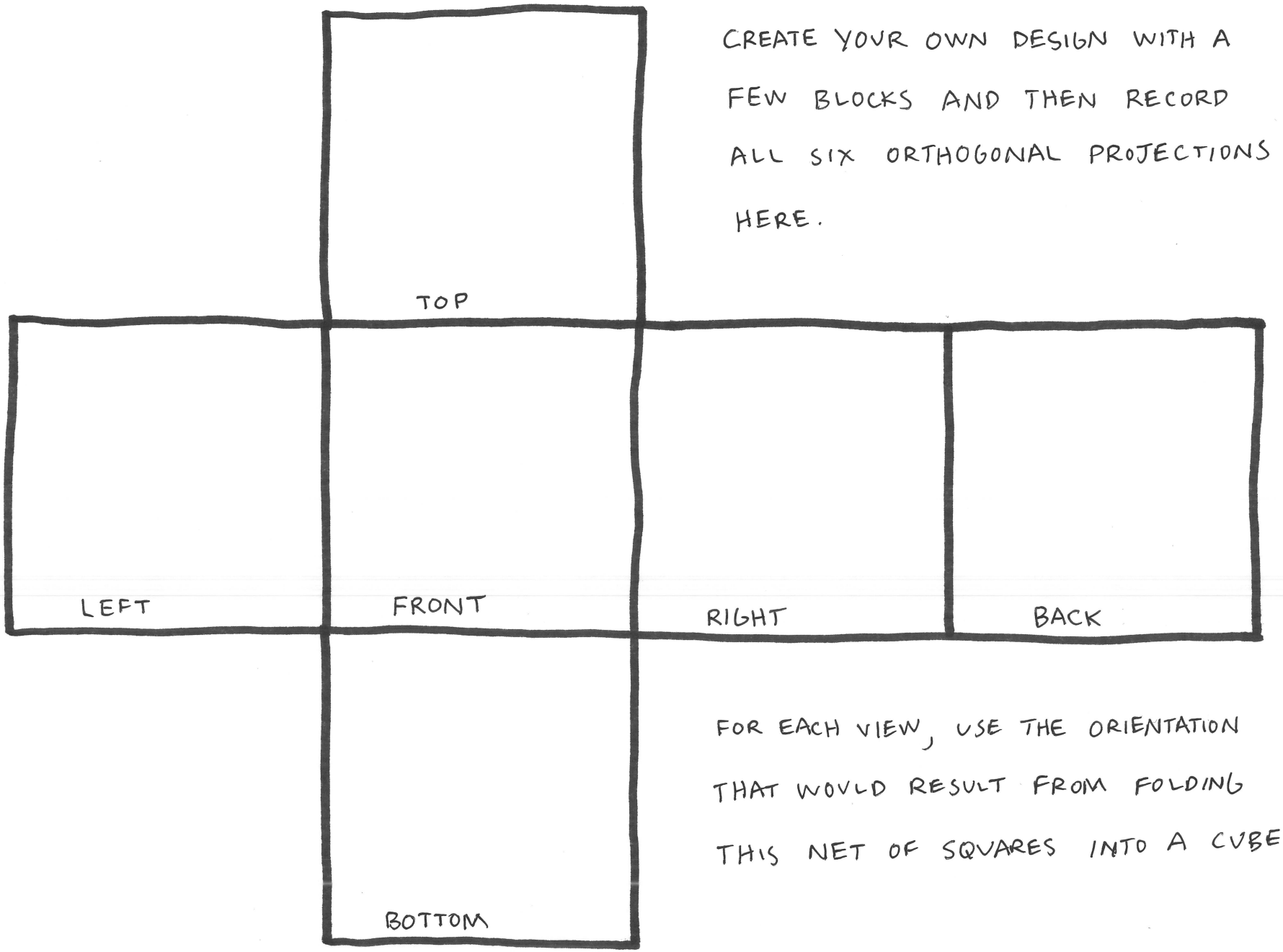
RIGHT

CREATE YOUR OWN DESIGN USING THE BLOCKS AND RECORD THE FRONT, TOP AND RIGHT-SIDE PROJECTIVE VIEWS HERE.



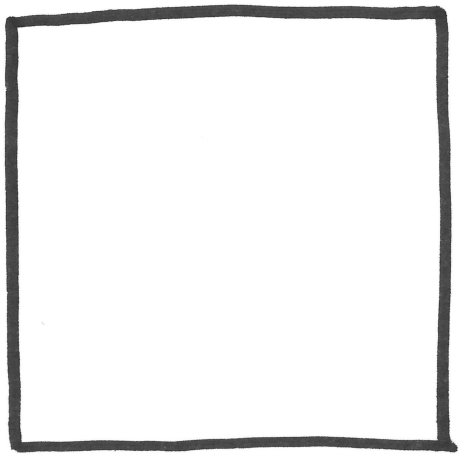
ONE MAY CONSIDER ALL SIX ORTHOGONAL PROJECTIONS.



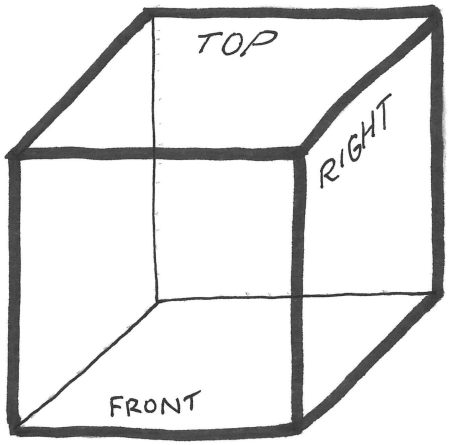


CREATE YOUR OWN DESIGN WITH A FEW BLOCKS AND THEN RECORD ALL SIX ORTHOGONAL PROJECTIONS HERE.

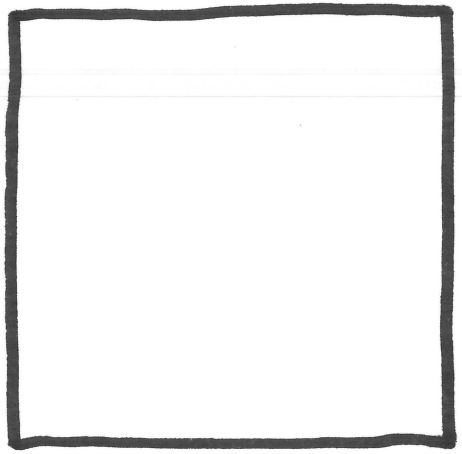
FOR EACH VIEW, USE THE ORIENTATION THAT WOULD RESULT FROM FOLDING THIS NET OF SQUARES INTO A CUBE.



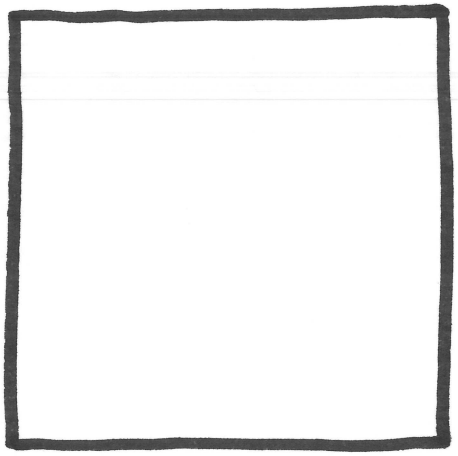
TOP



A CUBE LOOKS LIKE A SQUARE IN EACH OF THE THREE PRINCIPAL ORTHOGONAL PROJECTIONS.

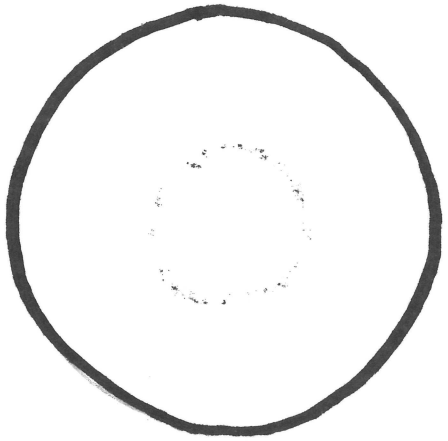


FRONT



RIGHT

WHAT SHAPE LOOKS LIKE A CIRCLE FROM THE FRONT TOP AND SIDE?



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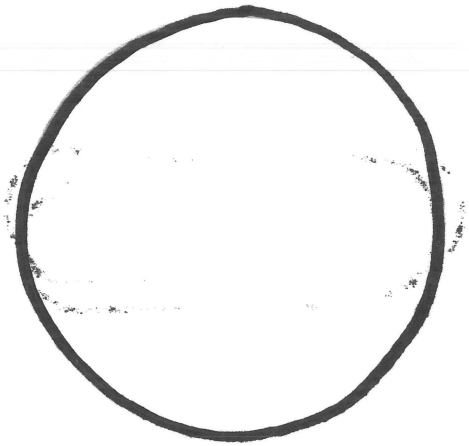

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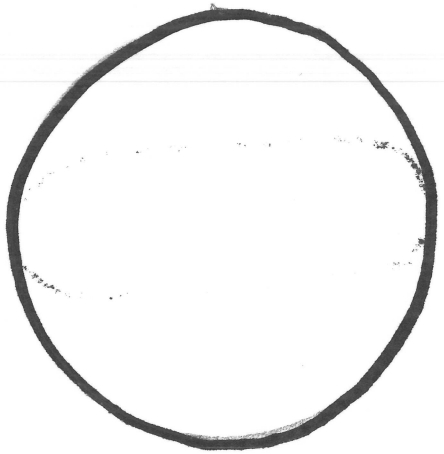
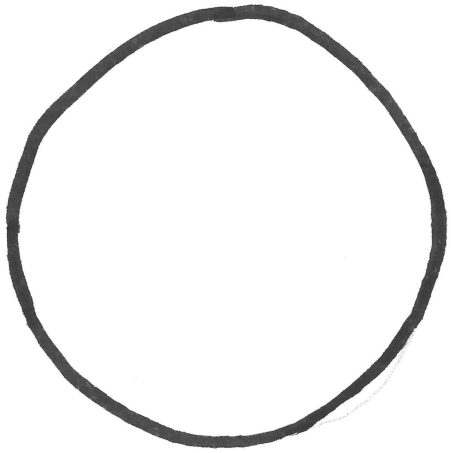
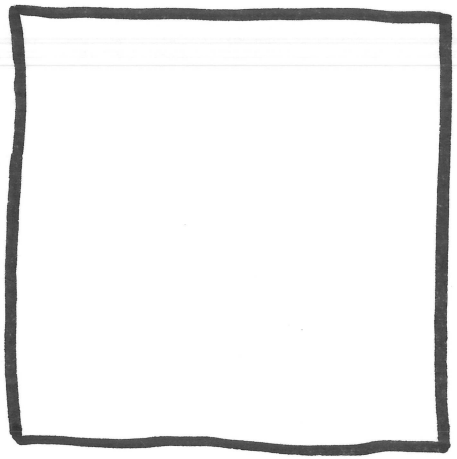


RIGHT

WHAT SHAPE LOOKS LIKE A SQUARE FROM THE FRONT AND SIDE, AND A CIRCLE FROM THE TOP? DRAW IT IN PERSPECTIVE HERE.



T



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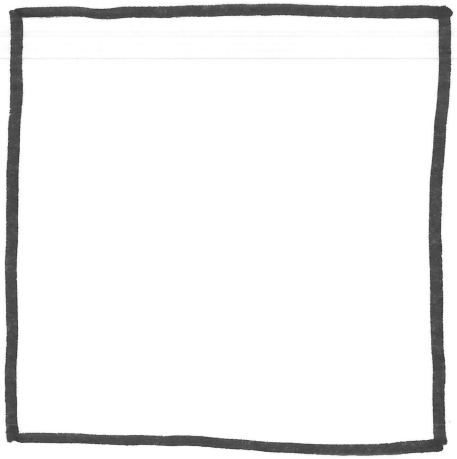
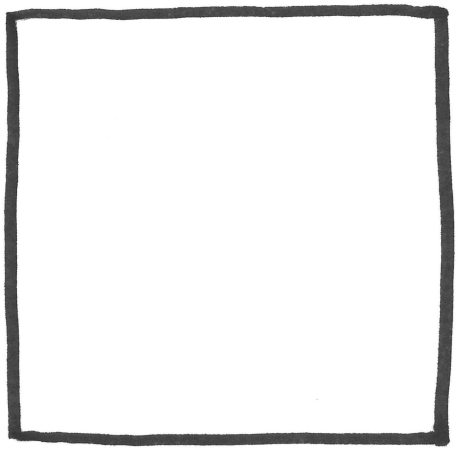
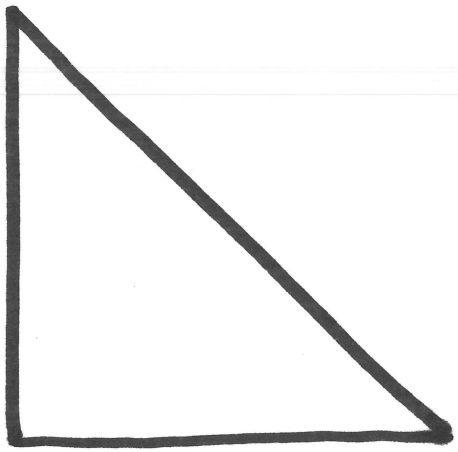


R

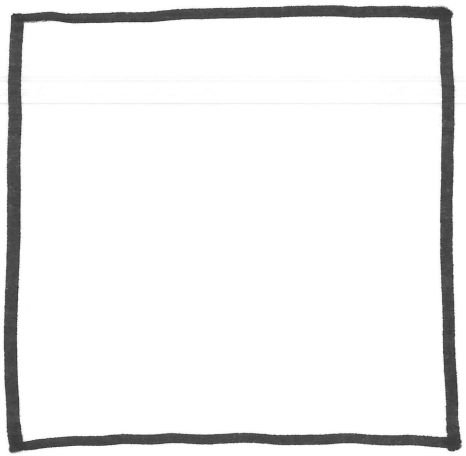
WHAT SHAPE HAS THESE ORTHOGONAL PROJECTIONS? DRAW YOUR ANSWER.



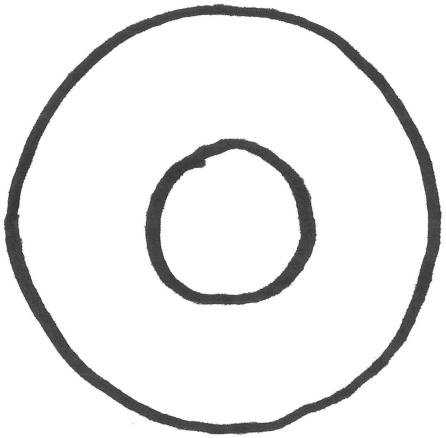
TOP



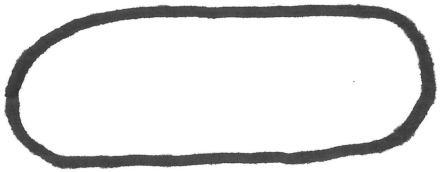
FRONT



RIGHT



WHICH FAMILIAR SHAPE HAS THESE PROJECTIONS?



CHALLENGE PROBLEM: CAN YOU IMAGINE A SHAPE WHOSE ORTHOGONAL PROJECTIONS ARE A CIRCLE, SQUARE AND TRIANGLE? THERE IS ONE...