



Davis Bews Design Group, Inc.
150 State Street East
Oldsmar, FL 34677
(813) 925-1300

Residential CAD Technician

Instructions for the Digital Interview

Updated 6/2/2022

Thank you for your interest in working with us! We are excited that you are considering applying for a position as Residential CAD Technician! If you run into any issues, please email admin@davisbewsgroup.com for support. However, please understand that emails to this address will not be accepted in lieu of the formal online interview. Please read this set of instructions before beginning.

The complete assessment consists of a short video interview, a 16-question multiple choice quiz, and a residential drafting exercise. Please read all instructions before beginning.

Instructions

1. Complete the camera interview. The questions are in Section I on the next page. Rest assured that you do not need to dress up, be in a fancy setting, or produce a high-quality interview. This step merely allows us to share, verbatim, your best answers to important questions with the appropriate people.
2. Complete the residential drafting exercise following the instructions in Section II. You will be providing a video recording of your screen while you complete the exercise.
3. Complete the multiple-choice quiz in Section III. When you submit all of your materials through our job portal, you will provide your answers to these questions directly in the submission form.
4. Submit your quiz responses, resume, CAD screen recording video and its corresponding .dwg file, and interview video via our job portal on our website [here](#).

Software/Hardware Requirements

1. Autodesk 2D AutoCAD (any version, including a free trial)
2. Screen recording software of your choosing. If you don't have one, you can download a free 30-day trial of Camtasia by TechSmith [here](#).
3. Printer (optional but recommended).

We **LOVE** Drawing Houses.



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Section I: Interview Questions for Video Response

Please record yourself on video answering the following questions. Don't worry about backgrounds or making anything look or seem professional, this is just a way to make sure that we can share your responses among the appropriate parties without mistranslating your words or meanings as it is repeated.

Your video should be approximately 3-5 minutes long.

1. What are you looking for in a position?
2. Why do you want to work with us?
3. Why are you a good fit for the position described from both a personal and professional standpoint?
4. What design and drafting software have you used (and what is your comfort level with each on a scale of 1 [familiar and you've used it before but still have a lot to learn] to 6 [you are an expert and can program AutoCAD and train others in its use from day 1 on the job]?
5. Tell us about both the best and worst jobs you've ever had? Why were they the best and worst?
6. How would you rank yourself versus your peers based on knowledge, speed, and accuracy among your classmates and/or colleagues?

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Section II: Residential Drafting Exercise

AutoCAD Floor Plan and Roof Plan Exercise – Cad Evaluation

Please print out and read this entire test before starting.

You will be required to take a floor plan and put it in cad, dimension the exterior, and then create a variety of roof plans based on entry location, height of entry change, and changing of roof pitches.

1. Open your version of Autocad, with architectural settings in place. Save your drawing calling it "your last name.dwg".
2. Turn your "Limits" to **OFF**.
3. Turn your Snap on by typing "SNAP" at the command prompt and turning it on.

Hint: Set your snap to 4 inch increments to layout exterior walls and back to 1 inch afterwards to lay out interior walls.

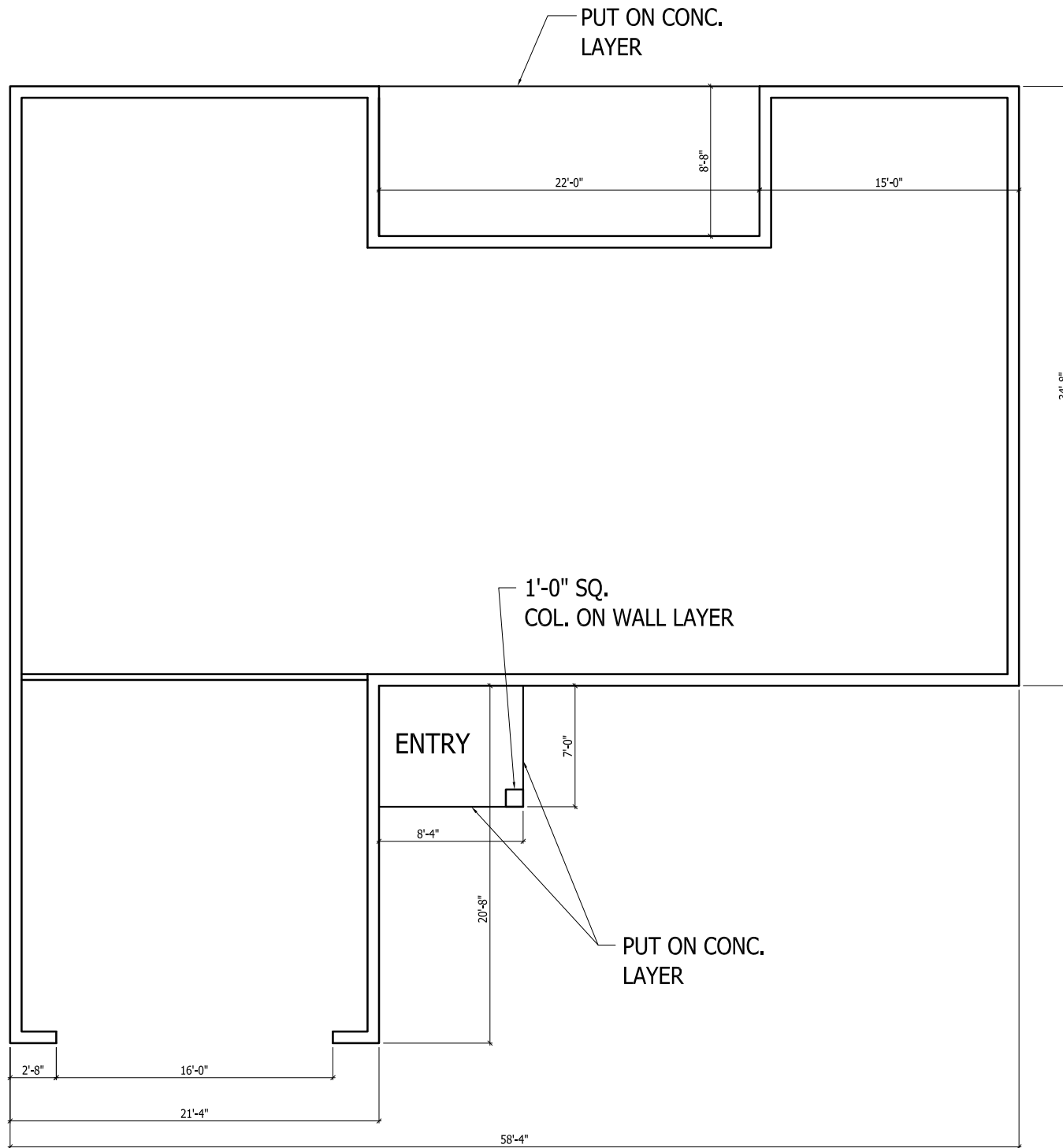
4. You will have to create the following layers:

<u>Layer</u>	<u>Color</u>	<u>Linetype</u>
CONC	9	default
DIMEN	red	default
HIDDEN	Green	Hidden
ROOF	30	default
WALL	White	default

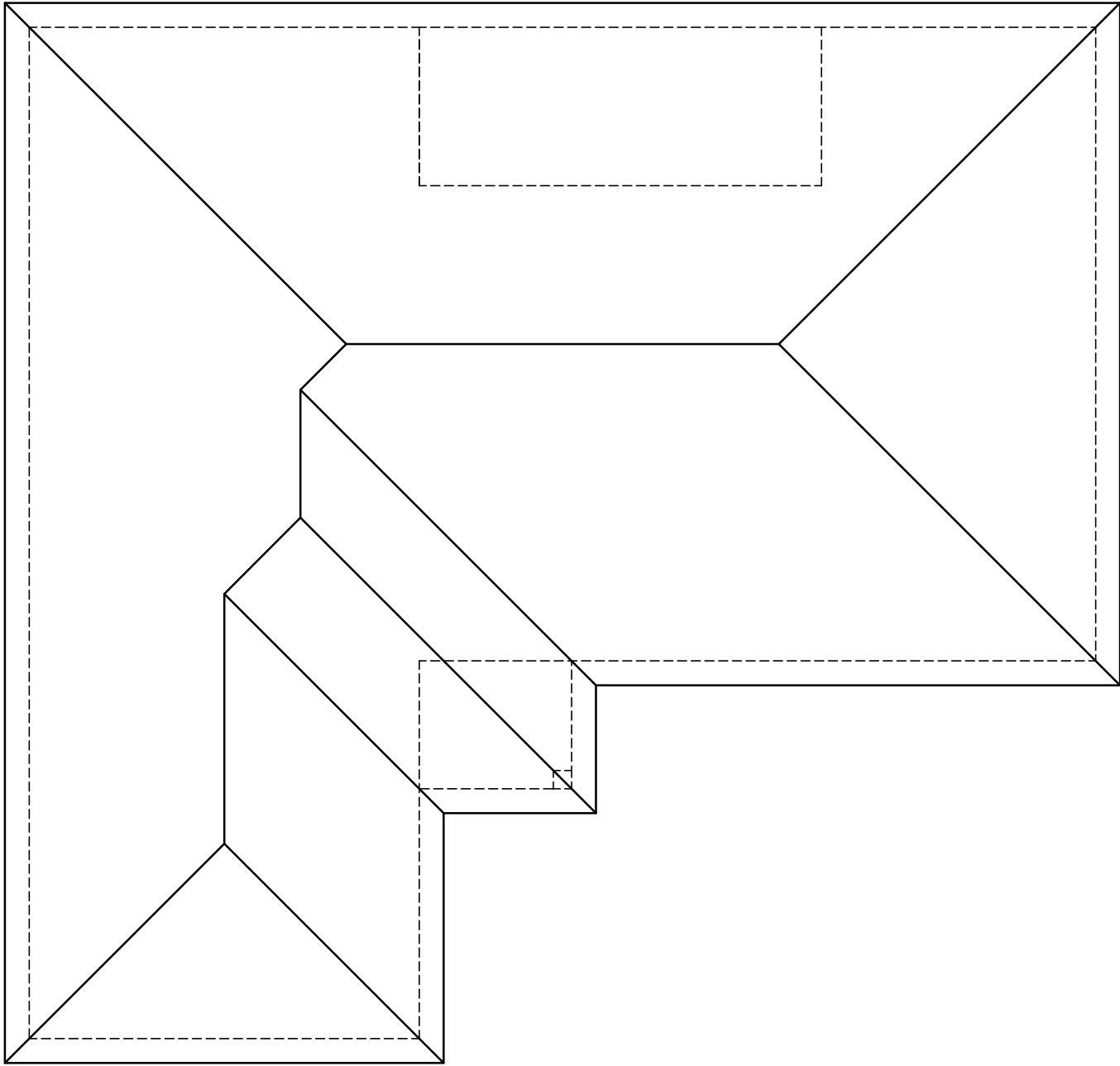
5. Layout Floor Plan No. 1 (do not layout example Floor Plan No. 2) by using the information given. The exterior walls are 8" wide. Interior walls are 4 inches wide. All walls and columns are drawn on the "**WALL**" layer.
6. Lanai and Entry concrete slab lines are on the "**CONC**" layer, but make sure you have the column on the "**WALL**" layer.
7. Once walls are drawn, set your snap back to 1".
8. Set your DIMSCALE to 48. Dimension the **exterior** of the floor plan. Use proper dimensioning techniques; ***not how it is shown on the example**.

Dimensions should be on the "**DIMEN**" layer. Make sure the dimension text is larger enough to read when printed. Make sure to use tick marks and not arrowheads.

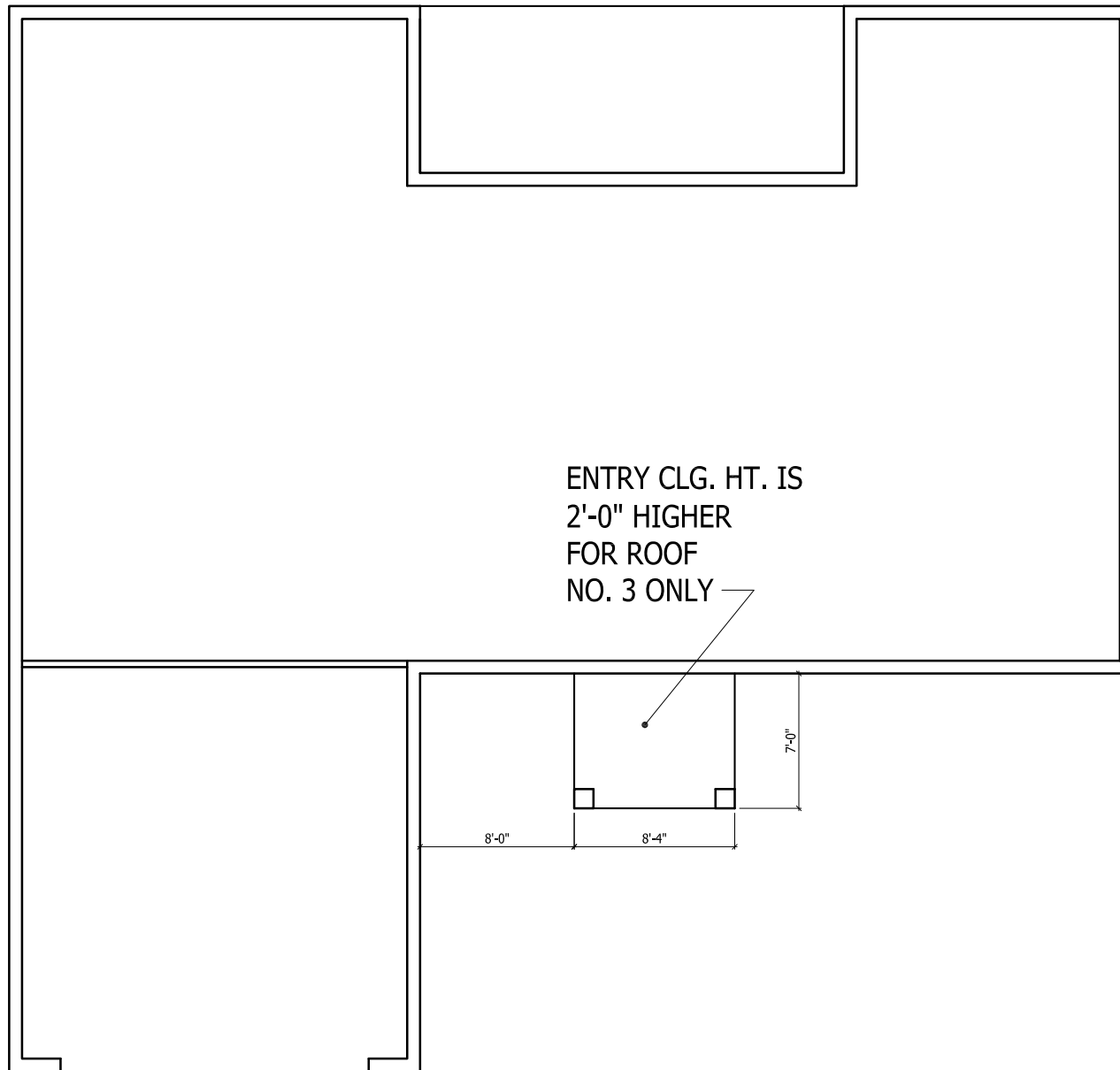
9. Once dimensioning is complete set your LTSCALE to 24.
10. Copy Floor Plan No. 1 over to the right and create a roof plan with all hip roofs (see example roof plan). Roof overhangs are to be 1'-4". Only the outer wall lines, columns, porch and lanai slab lines should be shown and placed on the "HIDDEN" layer. Roof lines are drawn on the "ROOF" layer.
11. After you have created the first roof plan, copy it over to the right. At this point you should have two identical roof plans.
12. You will modify the second roof plan by adjusting the entry location to reflect example Floor Plan No. 2. Revise the hip roof of the main house and show another hip roof over the entry area that engages (runs into) the main roof.
13. Next, copy the second roof plan over to the right (you should be showing 3 roof plans at this time). Modify the entry roof linework so it will be 2'-0" higher than the surrounding roof area but still engages (runs into) the main roof. Please note the roof pitch is 6:12.
14. Once roof number 3 is complete, copy it over to the right once more (you should be showing 4 roof plans at this point). On the 4th roof, modify the side to side roof pitch to be 10:12, leaving the front to back roof pitch as 6:12 (see example roof plan with hatching legend in your test packet). Do not modify the roof overhangs. Only change the roof pitch for this exercise. Then change the front left hip roof and entry hip to be gable ends.
15. Please review your work and revise as needed before submitting your cad file for our review.



FLOOR PLAN NO. 1

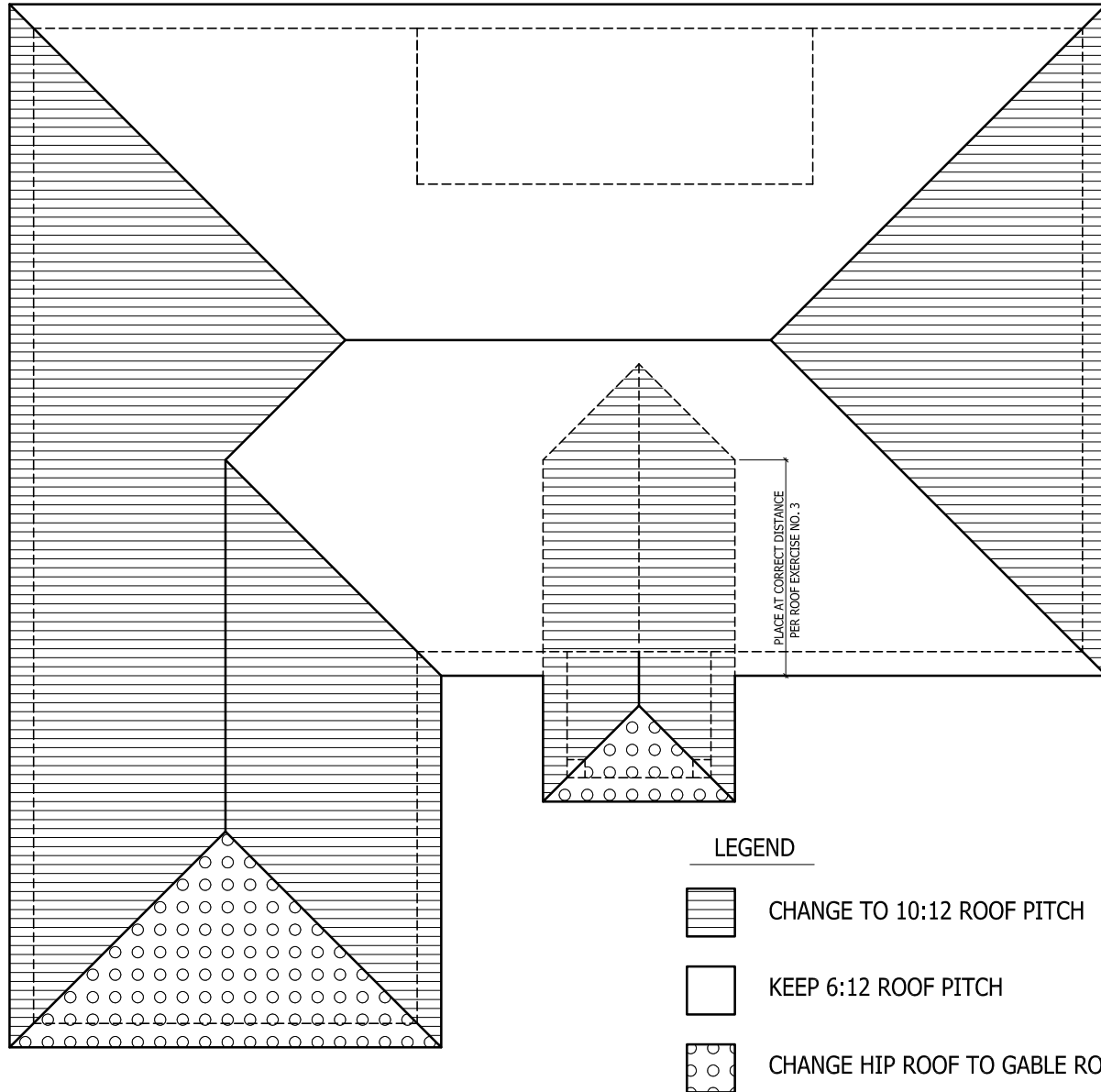


EXAMPLE ROOF PLAN



**MODIFIED ENTRY LOCATION
FOR ROOF PLAN NO. 2**

THIS IS A HATCH LEGEND ONLY - DO NOT DRAW THIS



MODIFY ROOF PITCHES AND GABLE ENDS
FOR ROOF PLAN NO. 4 - USE THIS TO SEE WHAT
THE CHANGES IN THE ROOF PITCHES WILL BE



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Section III: Multiple Choice Quiz

The multiple-choice questions begin on the next page. You will submit your responses via our job portal, at this [link](#).

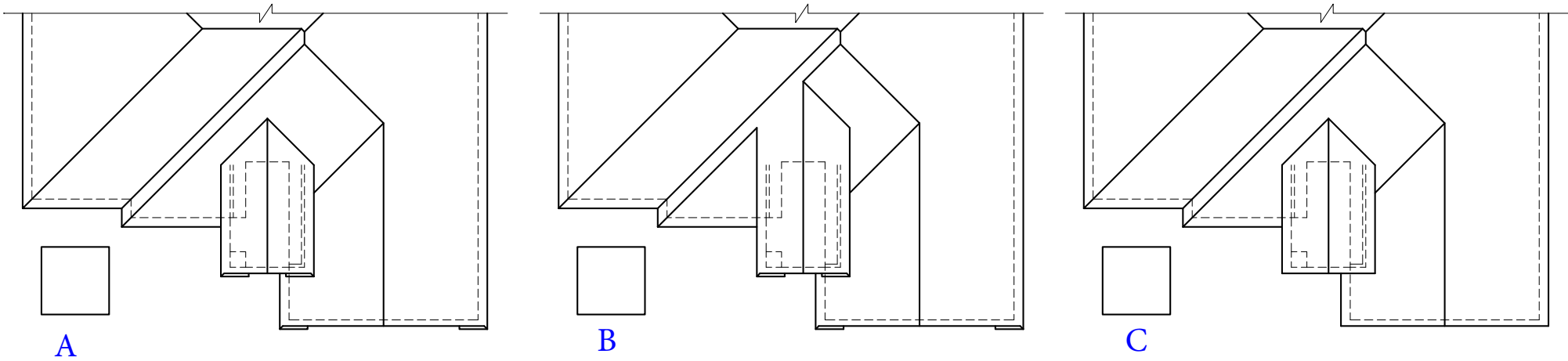
Along with these quiz answers, you will need to attach your resume, your CAD exercise screen recording video and its corresponding .dwg file, and your interview video.

You will hear back from us via your preferred method of contact within 3 business days. Thanks for applying and we can't wait to talk with you further!

We **LOVE** Drawing Houses.

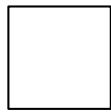
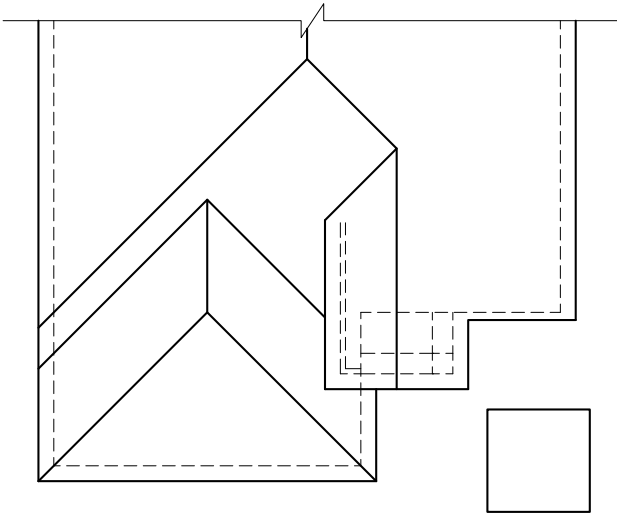
Question #1

1 SELECT THE CORRECT
ROOF PLAN

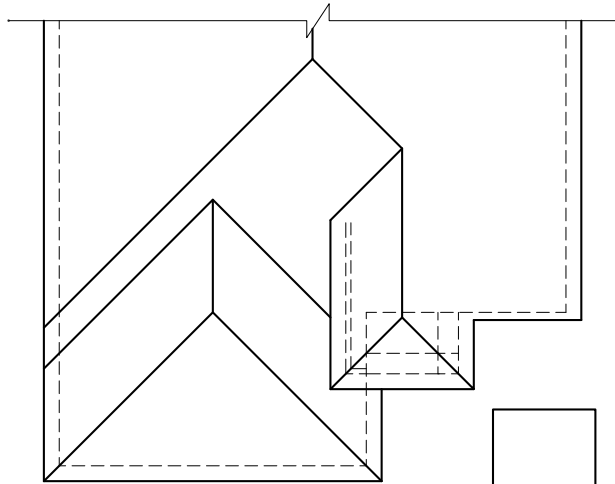


Question #2

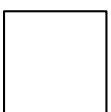
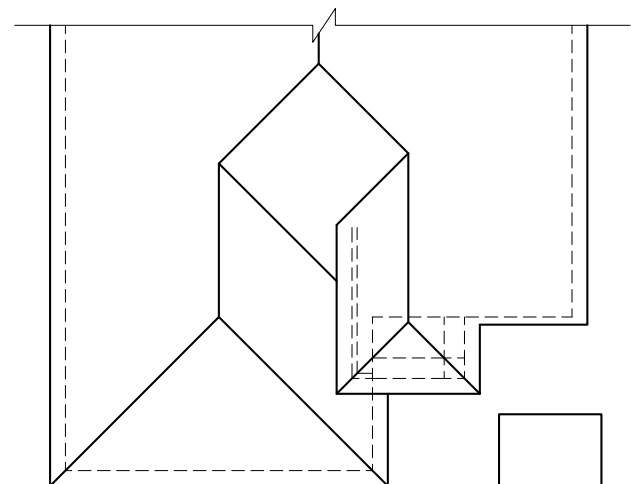
2 SELECT THE CORRECT ROOF PLAN



A



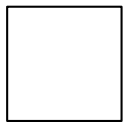
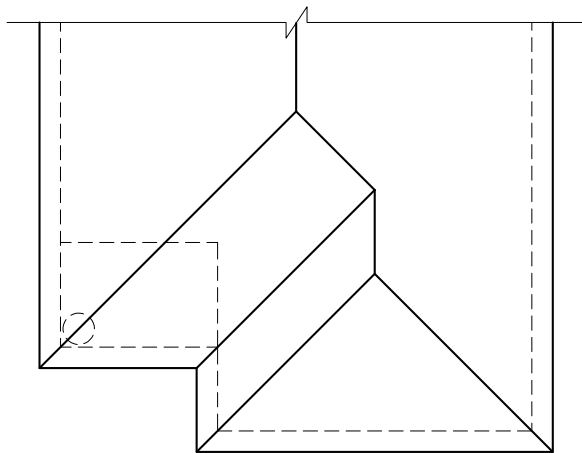
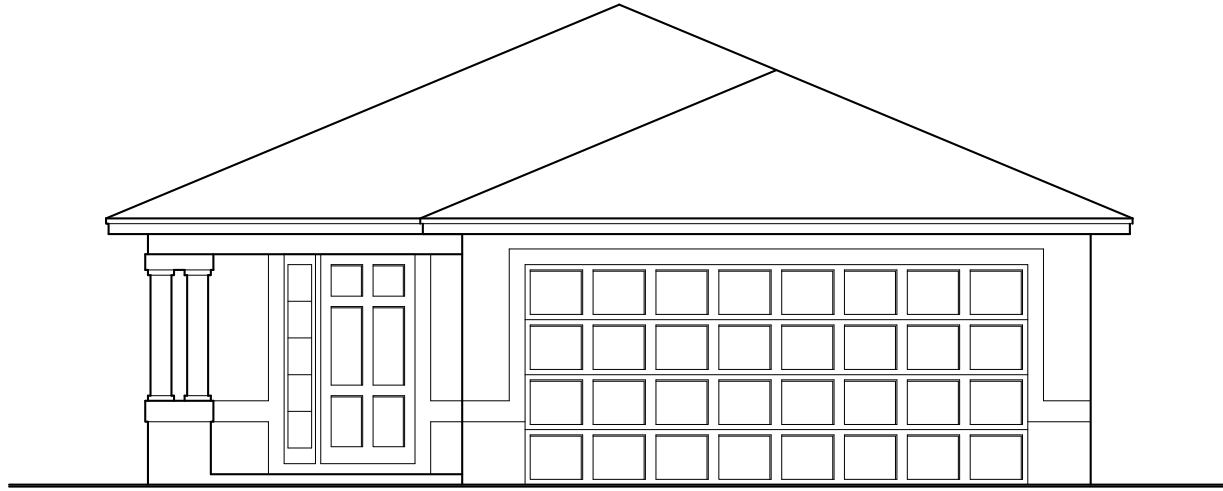
B



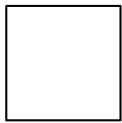
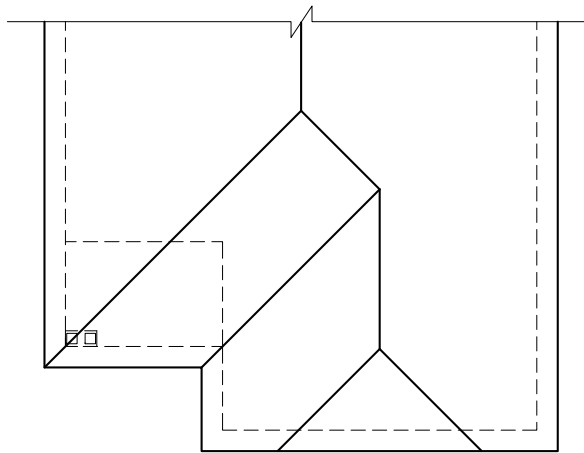
C

Question #3

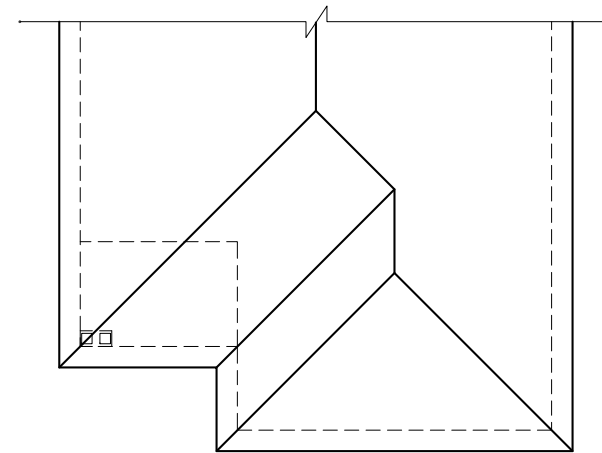
3 SELECT THE CORRECT ROOF PLAN



A



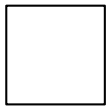
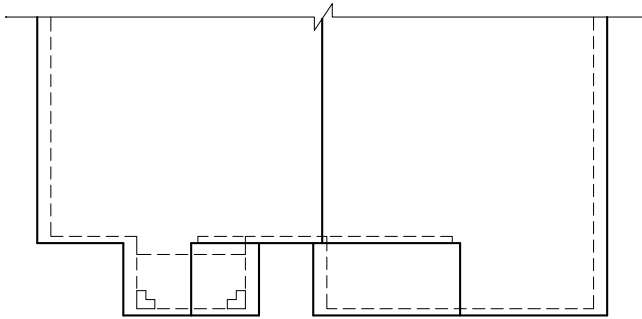
B



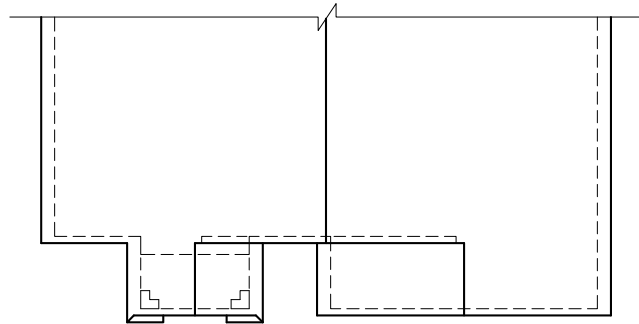
C

Question #4

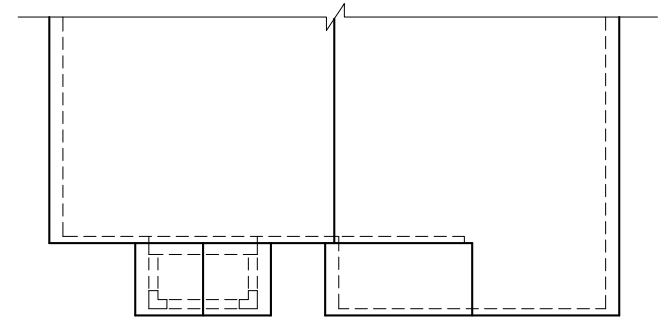
4 SELECT THE CORRECT ROOF PLAN



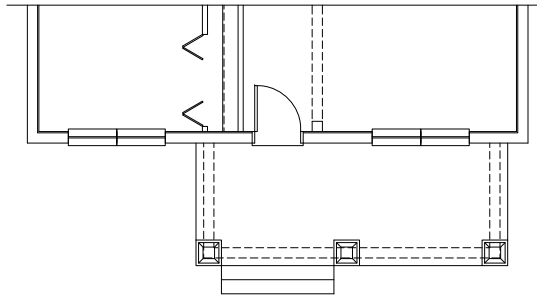
A



B



C



A

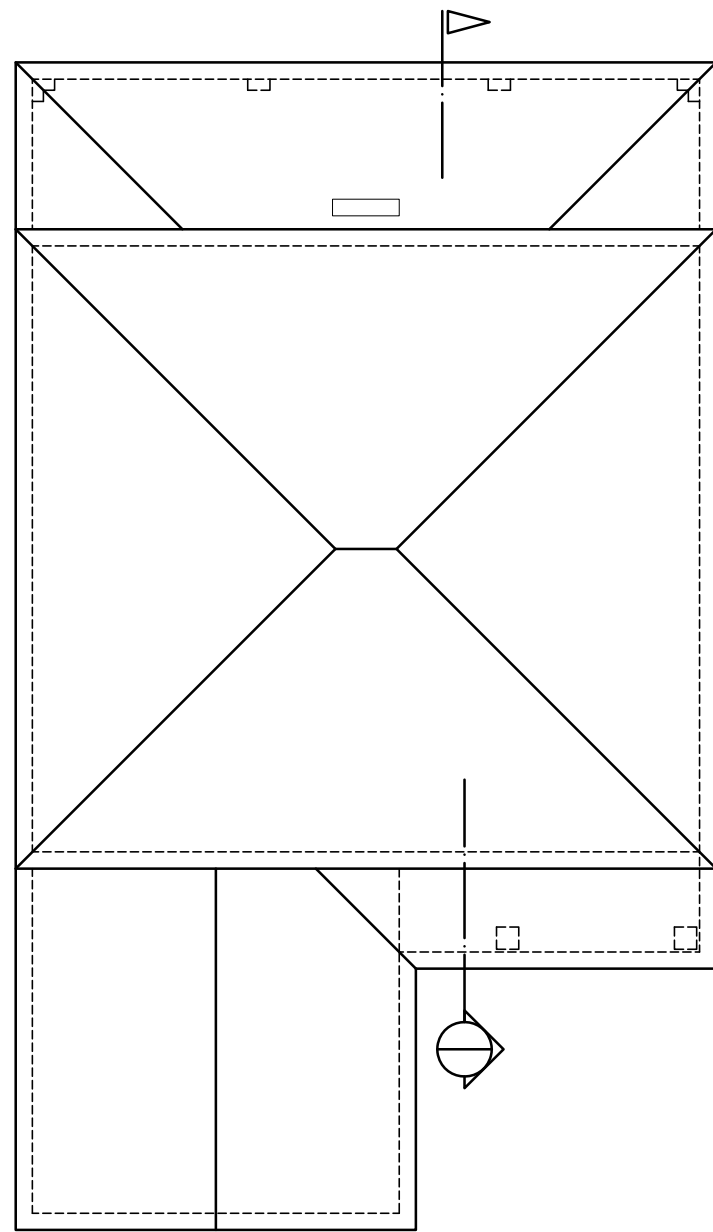


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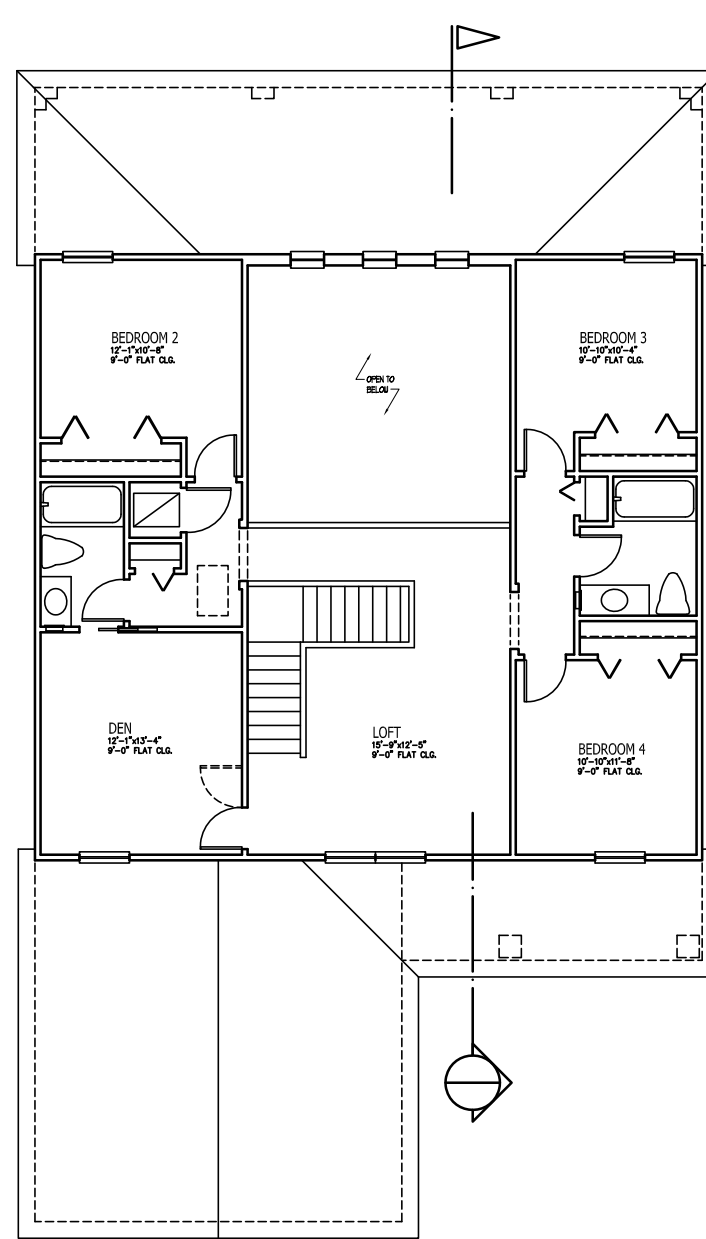


C

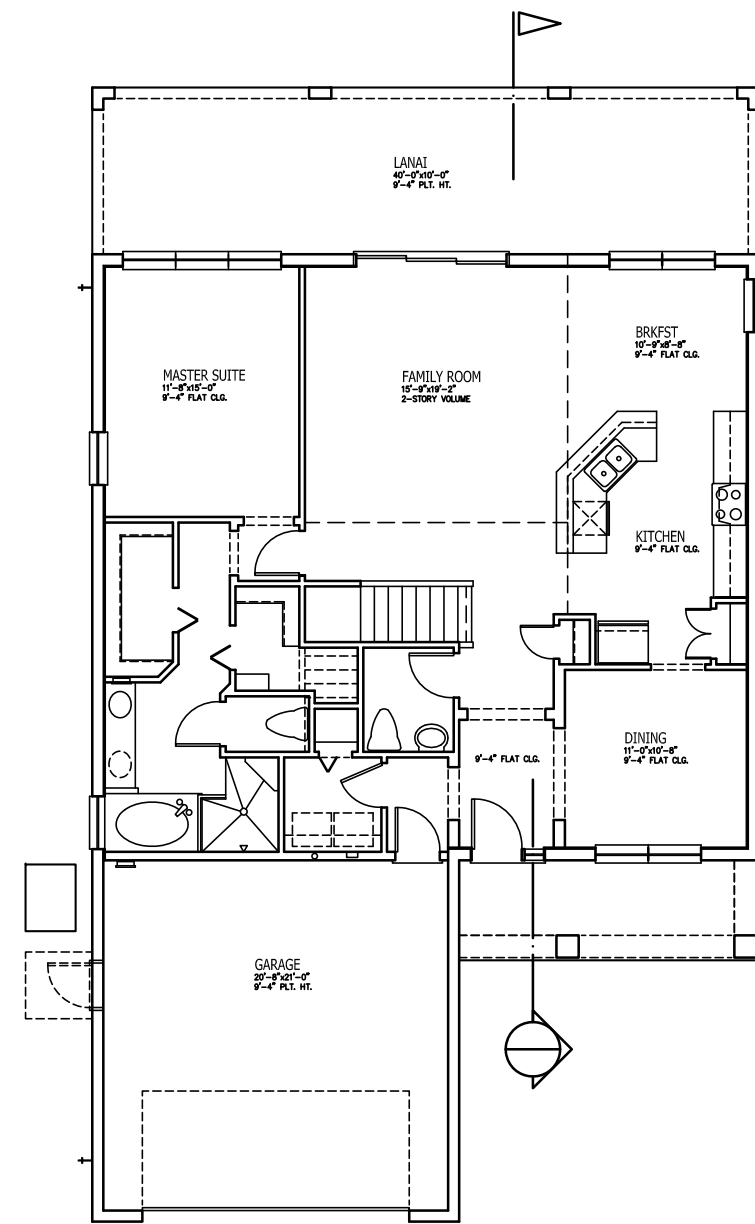
Question #5: PICK ELEVATION THAT BEST DEPICTS FLOOR PLAN



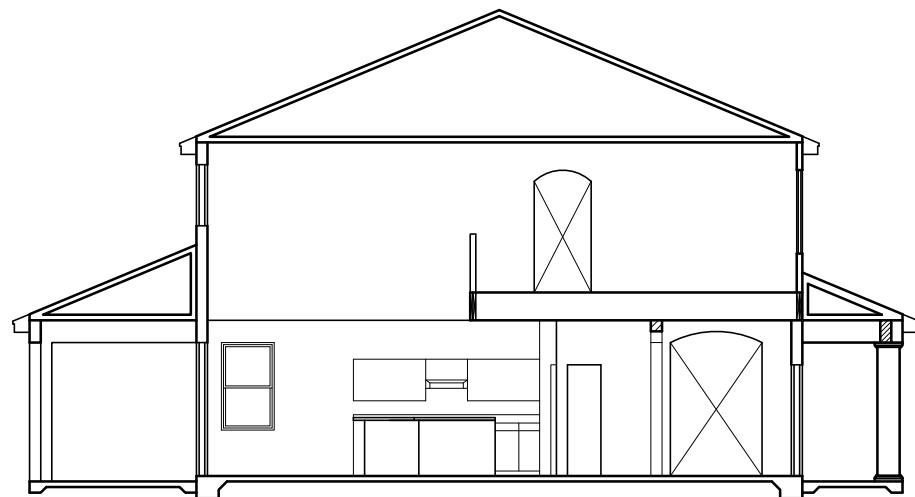
ROOF PLAN



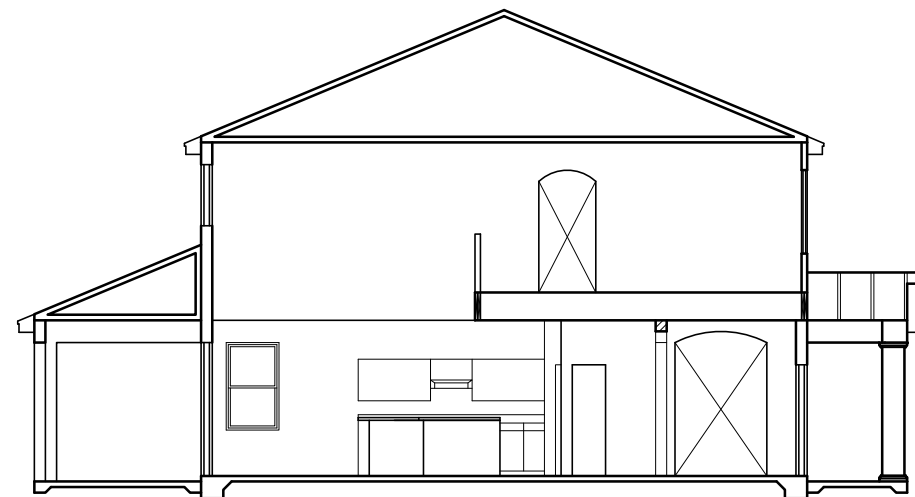
UPPER FLOOR PLAN



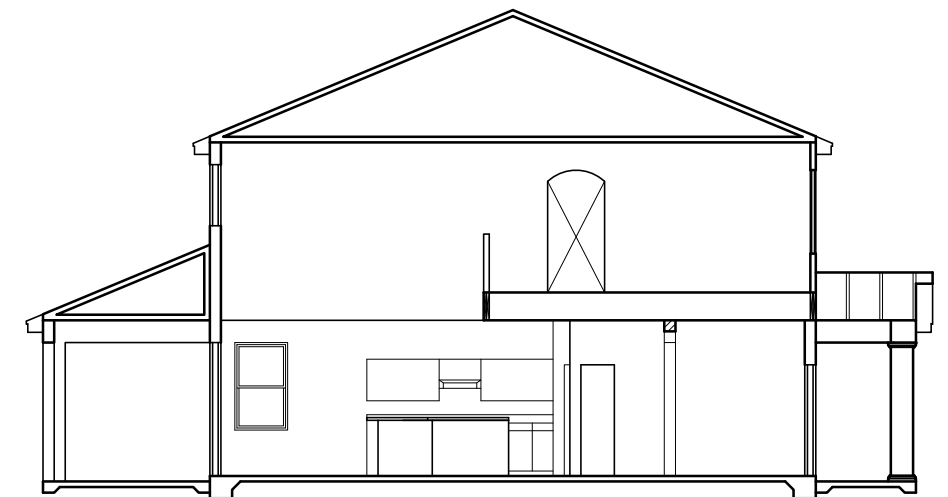
MAIN FLOOR PLAN



A

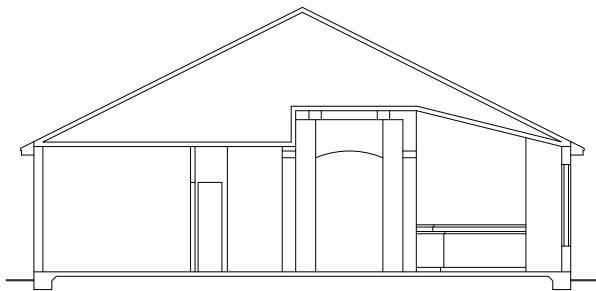
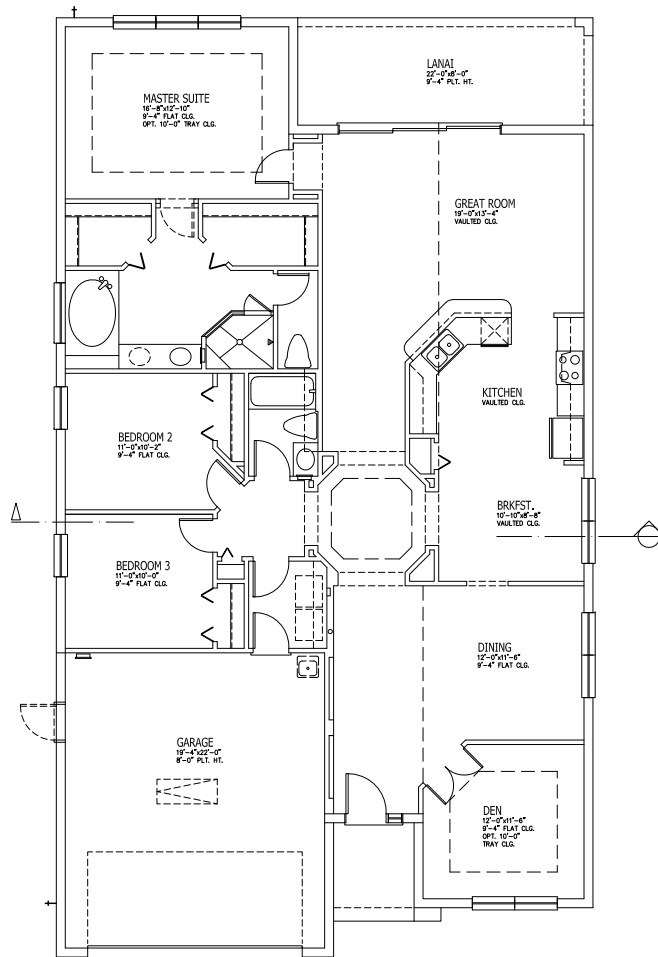


B

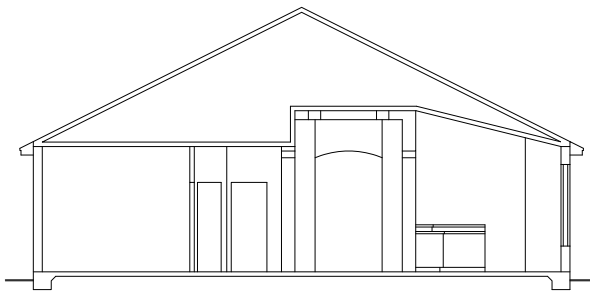


C

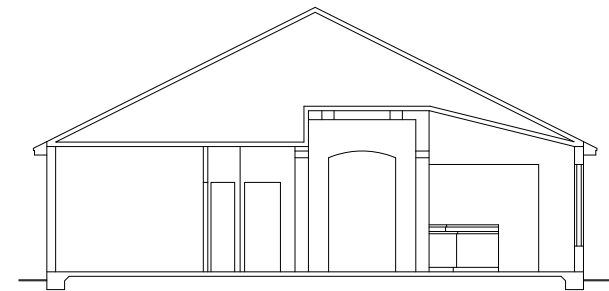
Question #6: SELECT THE CORRECT BUILDING SECTION



A



B

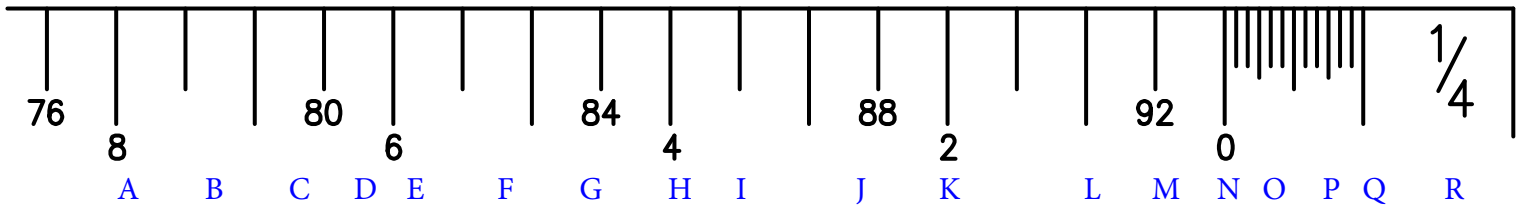


C

Question #7 SELECT THE CORRECT BUILDING SECTION

Question #8

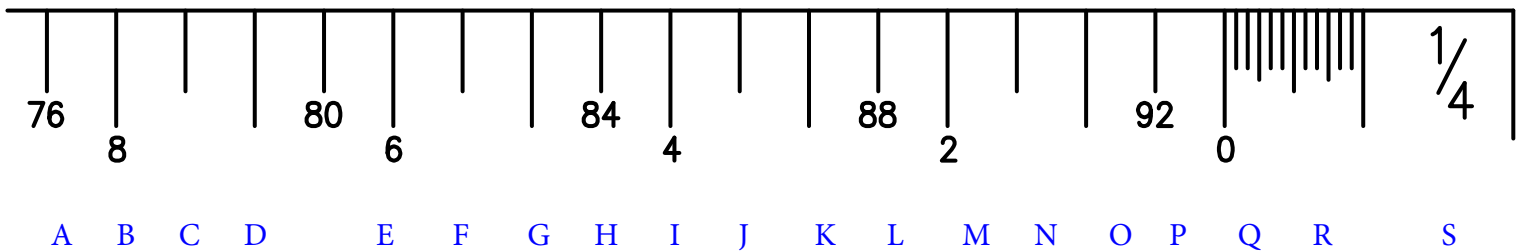
SHOW WHERE 4" WOULD BE ON THIS SCALE



1/4" SCALE SIDE

Question #9

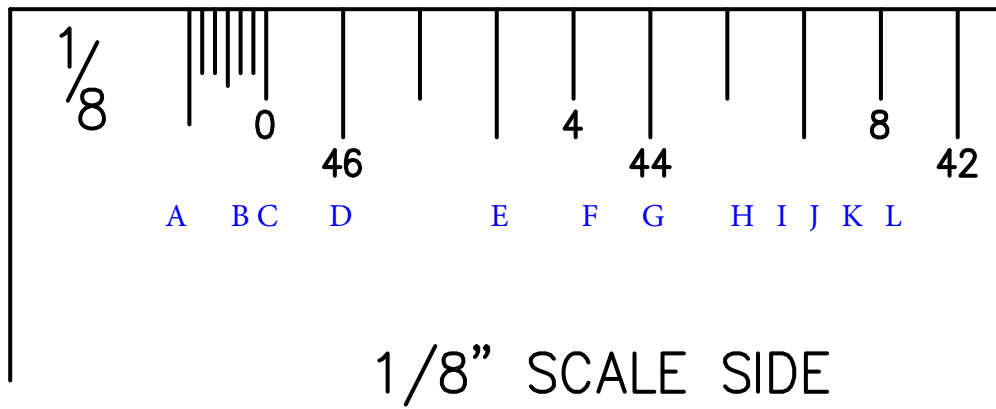
SHOW WHERE 48" WOULD BE ON THIS SCALE



1/4" SCALE SIDE

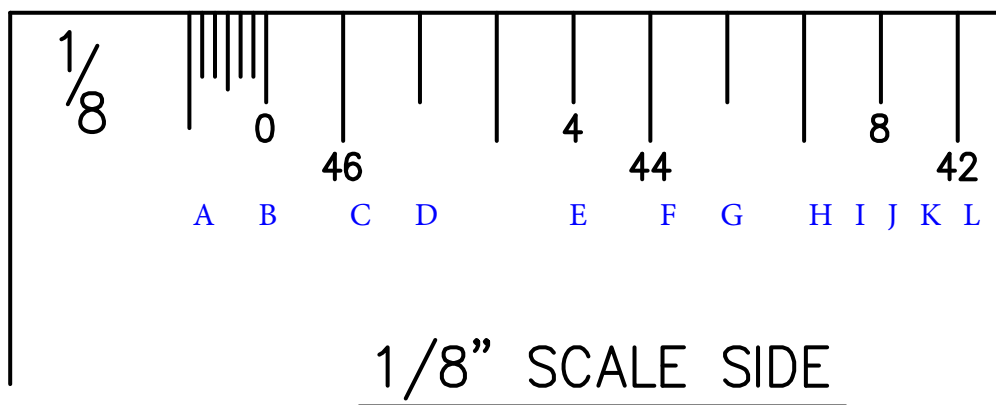
Question #10

SHOW WHERE 4" WOULD BE ON THIS SCALE



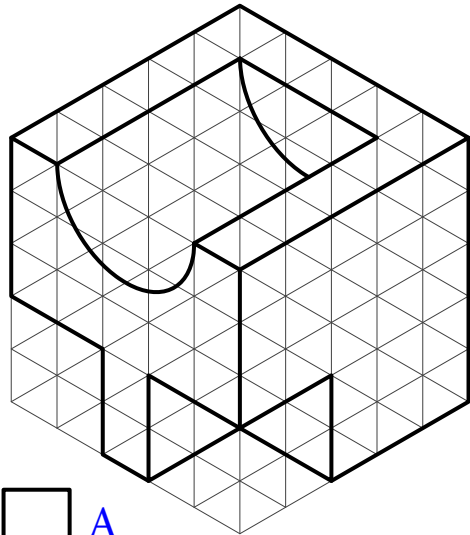
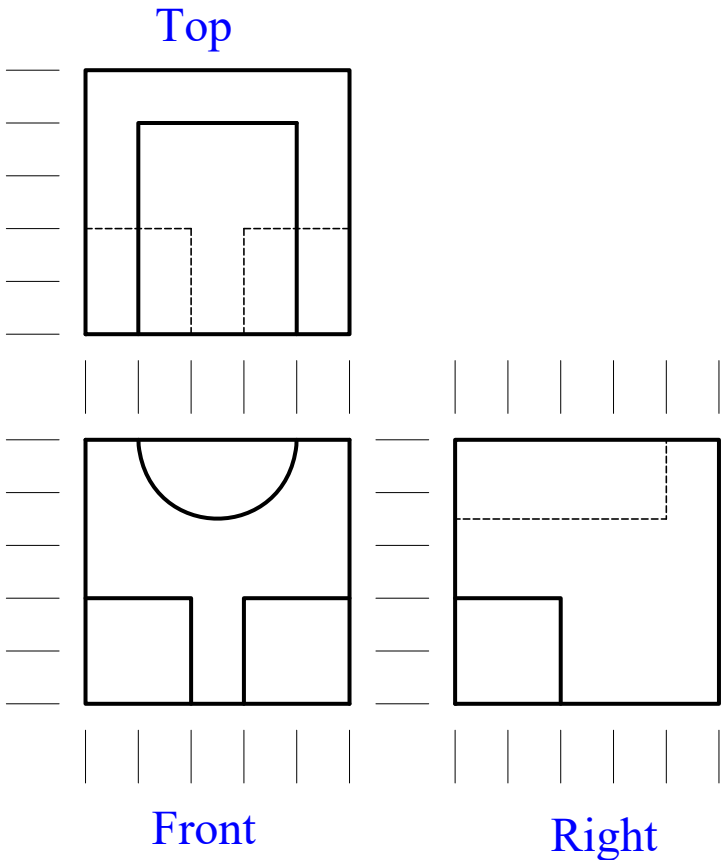
Question #11

SHOW WHERE 24" WOULD BE ON THIS SCALE

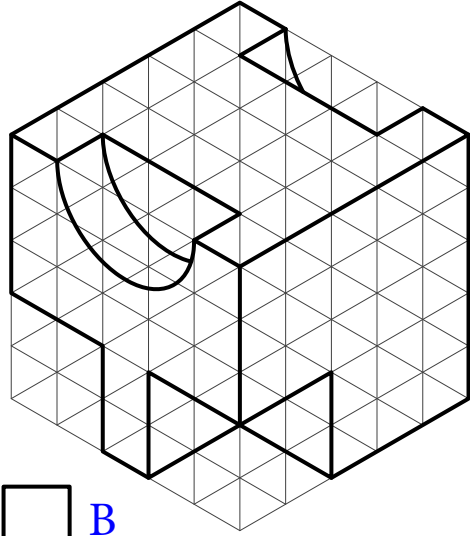


For Questions 12-16, you will be shown, on the left hand side, representations of views of a shape from its top, front, and right sides. On the right, you should select the 3D drawing of the shape, based on the clues shown on the left.

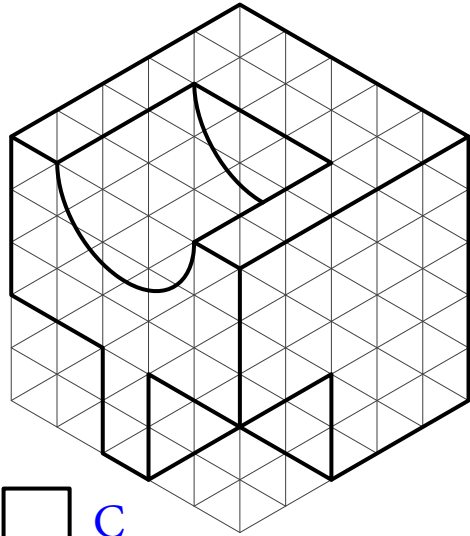
Question #12



A



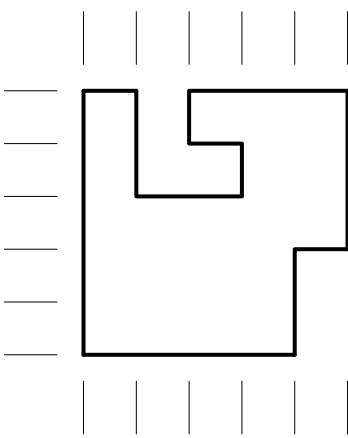
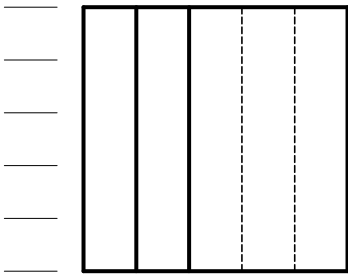
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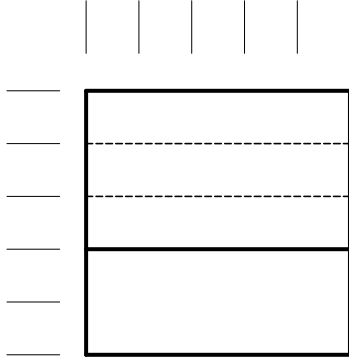
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Question #13

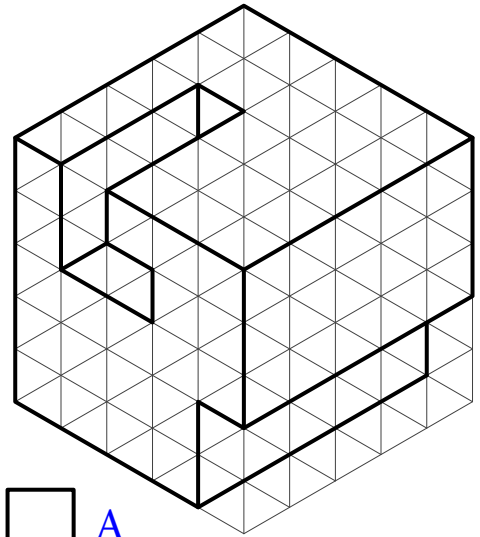
Top



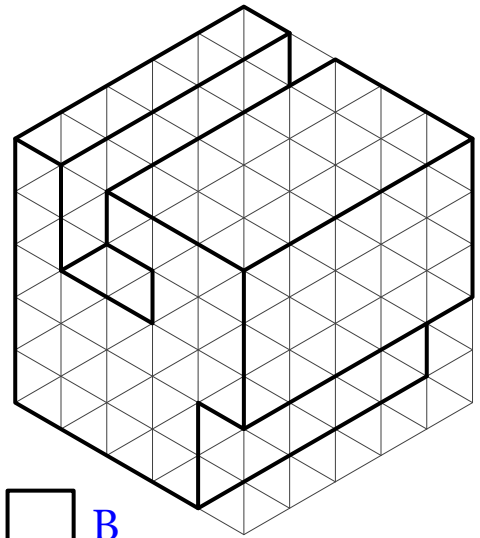
Front



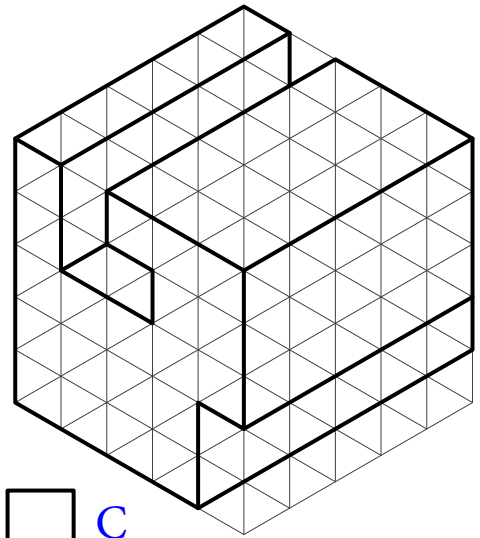
Right



A



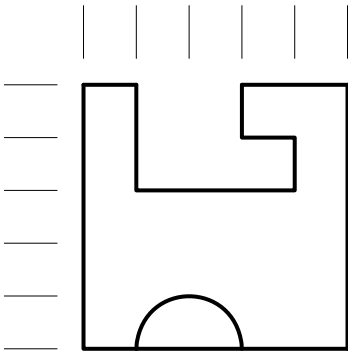
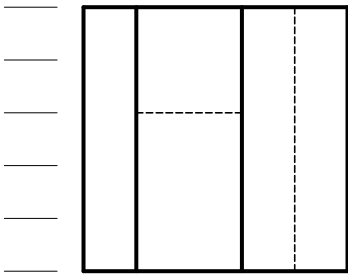
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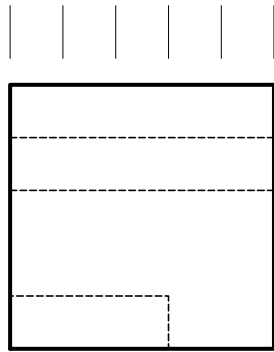
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Question #14

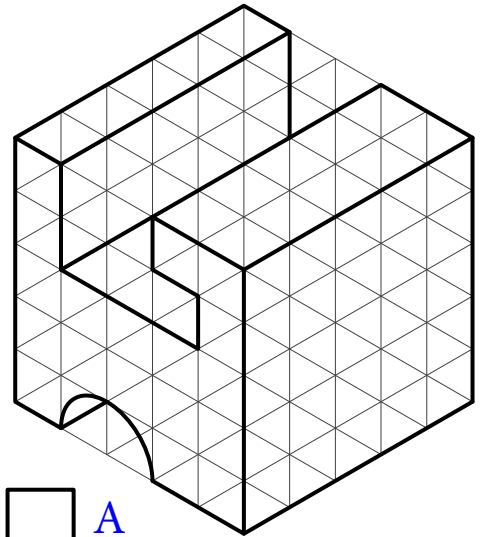
Top



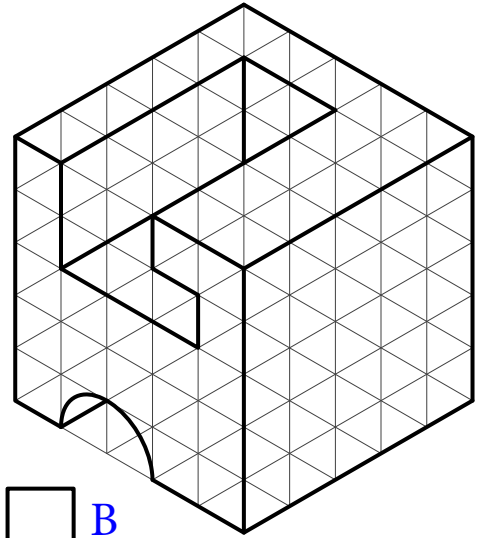
Front



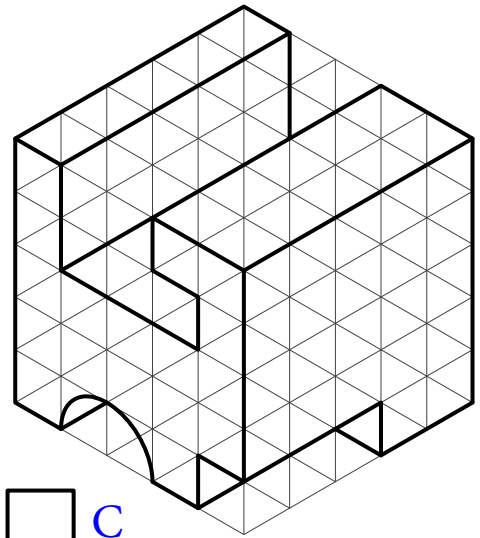
Right



A



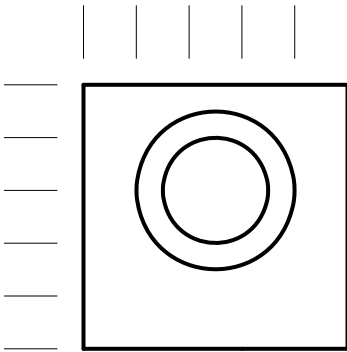
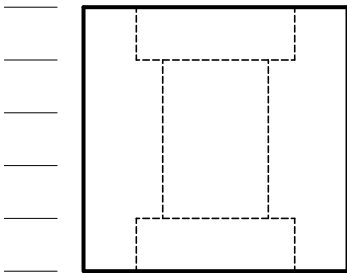
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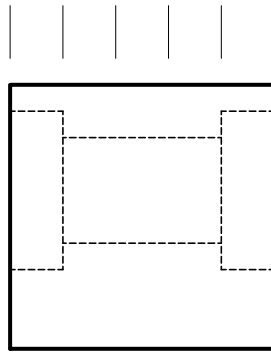
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Question #15

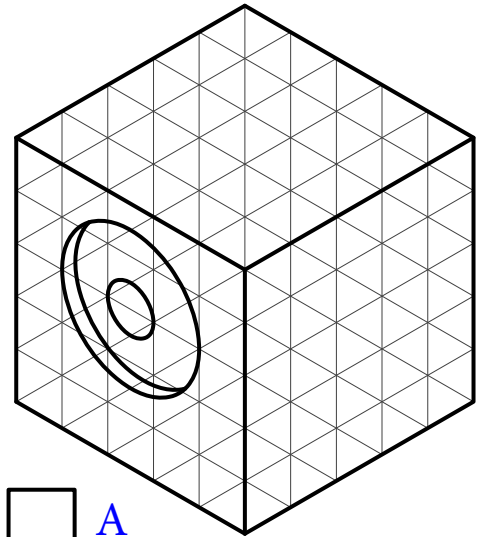
Top



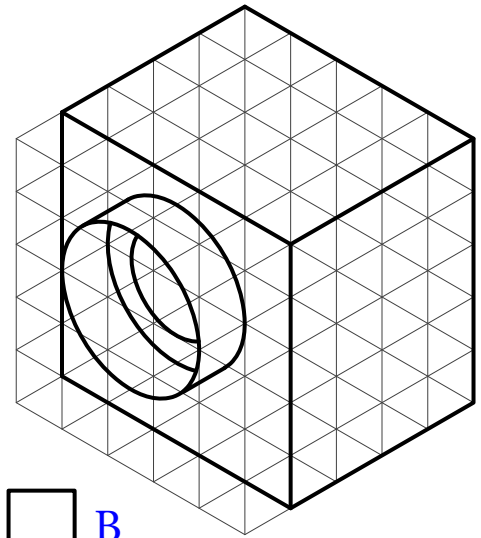
Front



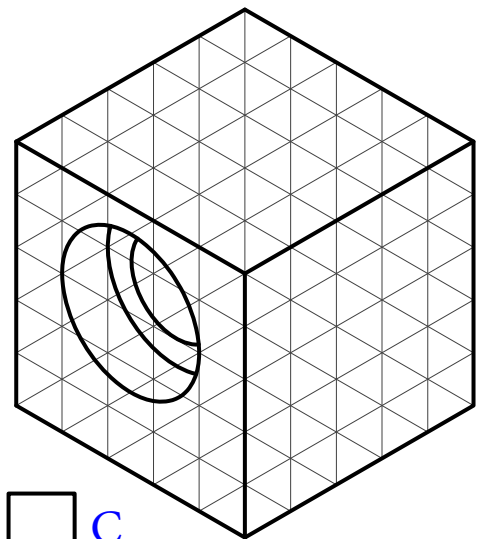
Right



A



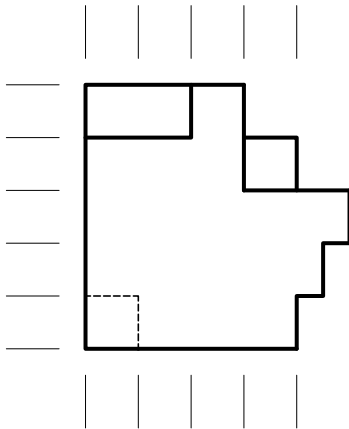
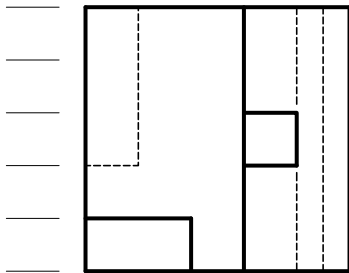
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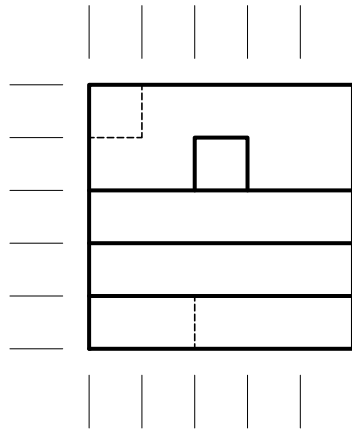
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Question #16

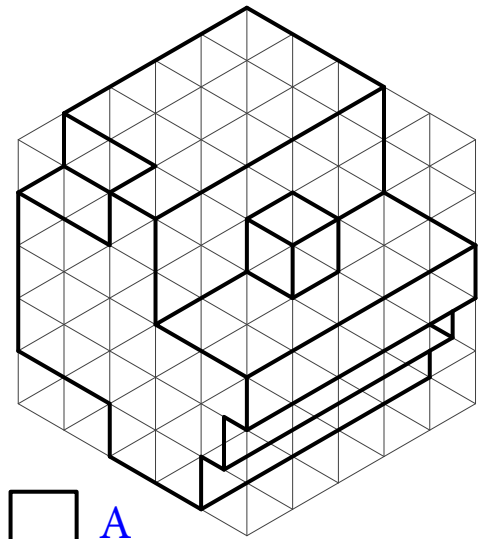
Top



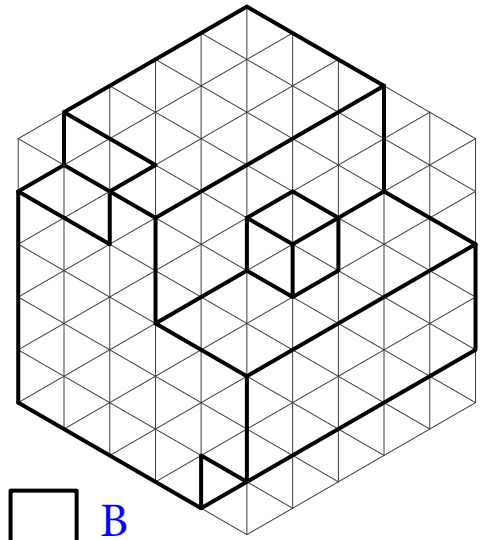
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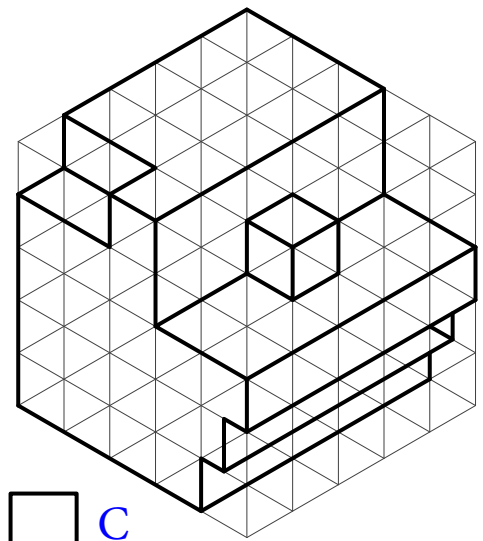
Right



A



B



C