

House Design Project Directions

Days One and Two - Individual design process:

1. Start out drawing your model very lightly in pencil, you'll probably be doing a lot of erasing.
2. Remember, the boxes on the graph paper are in $1/8$ " increments and each wall is $1/4$ " thick, so each wall is two boxes wide on your graph paper.
3. You can leave gaps between the rooms for doors. Doors are traditionally three feet wide so that means that each door opening would be six boxes wide on your model.
4. Use a ruler to measure as you go, you'll probably want your walls to fall on the $1/4$ " lines of the graph paper (as opposed to the $1/8$ ").
5. Measure twice, it's easy to get the $1/4$ ", $1/2$ " and $1/8$ " measurements confused.
6. Keep track of the room measurements on a separate piece of paper:
7. Calculate the areas of the rooms as you go to make sure that you aren't creating a wall that won't work. Use a calculator to check your work. Check to make sure the room size is between the maximum and minimum allowances. You really don't want to make a mistake and start over again.
8. When you are absolutely sure that your measurements are correct, that you have multiplied your fractions correctly, and that the room sizes are appropriate, then make your wall lines darker. Neatness will be part of your grade.
9. Rewrite your calculations very neatly on the right side of the paper. You should have each room listed separately, with the appropriate calculations for the room's area, and an appropriate area label. You may want to use color coding for each room.
10. Your individual design is due the first class of the Week of May 21st.

“DESIGN A HOUSE” PROJECT

NAME _____ CLASS _____

You get to design your own house! Your house will have four rooms. Assume that within each room will be all necessary counters, closets, utilities, showers, etc.

YOUR PRIMARY JOB? TO FIGURE OUT WHERE ALL THE WALLS WILL GO, AND MAKE SURE THE ROOMS ARE THE CORRECT SIZE.

After you do that, you'll work in teams on a single agreed upon design and get to build it! The work will be done in several phases outlined below:

PHASE 1: Learn about the project. Each person develops their own floor plan based on the requirements below. Do a draft of the calculations, then a final draft of the areas next to the floor plan.

PHASE 2: In groups of 2 or 3 check the floor plan area. Decide on a single design to use going forward. The group can use one plan, or modify a plan and use that. The group will then decide on the cut lines for the walls of the model, measure and label the necessary lengths, and mark each wall with A, B, C, etc. You can also decide on where doors will go between rooms.

PHASE 3: Designs will be traded with other groups and checked for accuracy. Draw the floor plan on the wooden base of the model. Make sure your names and class are on the back of the model.

PHASE 4: Cutting day! Walls will be measured by each group member and then cut. Walls will be labeled with your names and their letter labels.

PHASE 5: Glue the walls to the base!

You are limited to a total of 10 boards (including the four that serve as the outside. Below are the minimum and maximum square inches allowed for each of your four rooms. Be careful when calculating. You will be multiplying fractions and it can get messy. I'll be double checking your math.

<u>ROOM</u>	<u>MINIMUM SQUARE INCHES</u>	<u>MAXIMUM SQUARE INCHES</u>
Bathroom	5	10
Bedroom	10	30
Kitchen	6	20
Living Area	25	65