Floor plan exercise – Excel IV

The instructions and graphics for this sample are designed using three inches per square (or four squares per foot). The project is an addition added to the back of the homeowner’s house. The addition is 20 feet wide by 12 feet deep. Part of the addition is open to other rooms in the house. We will indicate that later on. We are going to layout out the room in Excel in order to plan for furniture arrangement. A finished example is in the Excel IV folder of the Computer Training Documents (graz) folder on your desktops. The file is called floorplan. The first workbook sheet – Completed – shows the completed plan. There are additions worksheets labeled Step 1, Step 2 and Step 3 for you to use in case you have difficulty completing part of the exercise.

Step 1
1. Open floorplan.xlsx
2. Click on Sheet 1. Perform the following steps.
3. Turn your workbook into grid paper – (all cells must be squares)
   a. Select **CTRL+A** to select the entire sheet
   b. In the **Home** tab, in the **Cells** group, select **Format** and choose **Column Width** and enter the number 1.
   c. Then select **Format** again and choose **Row Height** and enter the number 9.
4. Drop down about six squares from the top and the left, or just position your cursor in cell G7. At four squares per foot, highlight an area that’s 80 columns wide and 48 rows tall (or deep) for the required space of 20 feet wide by 12 feet deep. That would be G7 through CH54. Keep your selection highlighted. As you hold the left mouse button down and select cells you will see a small window that tells you the number of rows and columns that you have selected.
5. There is an easier method for selecting a group of cells if you know the exact range of cells.
   a. Use the **Go to** option.
   b. In the **Home** tab, the **Editing** Group, click on the down arrow below **Find & Select**.
   c. Choose **Go to**: 
   d. Fill in the exact range in the **Reference** field - G7:CH54.
   e. Click **OK**.
   f. While the cells are still highlighted, apply the borders as shown below from Step 6 forward.
6. Click on the drop down menu next to the **Borders** option in the **Font** Group of the **Home** tab on the ribbon.

7. Choose **More Borders** at the bottom of the list. The **Format Cells** dialog box opens to the Borders tab.

8. Choose the **Style** of border on the left side of the dialog box by clicking on the line style.

9. Then choose the thick **Outline** border from the options provided.

10. Then click on the square to apply that border style to each side of the rectangle. In the image to the right you will notice that there are only two borders applied to the selection – the bottom and the right. Click on the top and the left to apply the border to those sides.

11. Notice also that in addition to changing the border style, you can also change the border color in the box below the Style selection.

12. Click **OK**.

We are going to indicate the location of the doors and windows by indicating the thickness of the walls. They are 2x6 walls. A 2x6 board is only 5.5 inches wide, but if you add .5 inches for the interior wall covering, that equals six inches, or two of the squares. The total exterior space is now 21 x 13.

13. Take your cursor and position it in Cell E5 and click and drag it through Cell CJ56. Repeat Steps 2 – 8 above. Your spreadsheet should look like this.

We now need to indicate the exterior doorway on the plan. It is 6’ wide and will be centered on the right wall.

14. To indicate the doorway on the plan select cells CI19 and CJ19.
15. Apply a top border to those cells as directed in steps above.
16. Select cells CI42 and CJ42. Apply a bottom border to those cells.

Your doorway will be indicated on the plan. Next, we want to indicate the window on the plan. The main window will be on the top border and will be 12’ wide, again centered on the plan.

17. Select cells V5 and V6. Apply a right border to these.
18. Select cells BR5 and BR6. Apply a right border to them.

Now we are going to indicate the interior doorway between rooms of the house with a dotted line. It is in the center of the bottom wall with a 3’ wall on each side.
19. Click in the wall starting in cell S55. Select thru cells BV56.
20. Now click on the **Borders** icon and choose a dotted line style and apply to the top and the bottom borders.
21. Click OK.

There is a fireplace centered on the left wall. It extends 2’ from the wall and is 8’ wide.

19. Apply a border around the fireplace.

*Step 1 sheet of floorplan.xlsx shows this exercise completed to this point.*

**Step 2**
Now we’re going to apply color to the walls and the fireplace to be able to see them more easily on the plan as shown by the image on the right.

20. Select cells E5 thru V6. On the **Home** tab click on the fill icon and fill those cells with a bright yellow color.
21. Now select the rest of the exterior walls (in turn), excluding the doors and window and also fill those with the same bright yellow.
22. Select the window and the door and fill them with a light yellow.
23. Select the fireplace and fill it with a dark brown. You can also color that section of the wall brown.

*Step 2 sheet of floorplan.xlsx shows the exercise completed to this point.*

**Step 3**
Now that we have the basic shape of the room laid out, we can use the **Shapes** section of the **Insert** tab of the ribbon to create shapes representing your furniture and move them around in the room. We can create them below the room and then move them up once we have the shape created.

24. We are going to create a rectangular couch that is 7’ long and 3’ wide or 28 x 12 squares.
25. Position your cursor a few rows below your floor plan.
26. Click on the **Insert** tab.
27. Choose the drop down arrow below **Shapes** in the **Illustrations group**.
28. Choose the **Rectangle** and then click and drag it on your screen.
29. You will need to drag it so until it reaches the 28 x 12’ square size. (You may have to play with this and it may be a bit time consuming.)
30. Give your couch a fill color.
31. Now create a 3’x3’ square for a chair. 12 x 12 squares. Again, give it a fill color.
32. Let’s create a round coffee table. Go to **Insert > Shapes** and select a circle. Make it approximately 3’ in diameter.

*See Step 3 sheet of floorplan.xlsx to see the exercise completed to this point.*

**Step 4**

Once you have created the basic shapes you can click on them, making sure to get the 4 headed arrow and move them into the room proper. You can move them around as needed. You can also rotate them so that they are angled. And you can make more shapes as needed.

You can also format your shapes so that they look more like furniture.
33. Right click on your couch shape.
34. Select **Format Shape**
35. Select **Fill**.
36. Choose **Picture or Texture fill**.
37. Choose **Clip Art**
38. In the Search Text Box type in “Couch” and click **Go**.
39. One of the results will be a couch – looking down from the top.
40. Select it and it will replace the contents of your shape with the couch image.

**Almost finished**

Don’t forget that you want to indicate the scale of your plan on your spreadsheet.

41. Click in a number of cell below the floor plan.
42. Click on **Merge and Center** in the **Alignment** group of the **Home** tab.
43. Type in the **Scale**. 1 square = 3 inches.
44. You can also merge some cells across the top and type in a title – **Family Room Addition Floor Plan** and then save your work. Or you can use the **Center Across Selection** option when you select a group of cells and right click and select format cells.
Just a note – even though you have turned your spreadsheet’s cells into squares they do not always print as squares. You may have to double check it. Sometimes using the print screen button (PrtScn) is helpful. It prints your floor plan as an image.