



TouchDraw for Android Floorplan Tutorial

Table of Contents

1. Introduction.....	3
2. Step 1 - Creating a New Drawing.....	5
3. Step 2 - Selecting the Units.....	6
4. Step 3 - Configure Points Per Unit.....	9
5. Step 4 - Creating the Exterior Walls.....	12
6. Step 5 - Styling the Exterior Walls.....	16
7. Step 6 - Locking the Exterior Walls.....	19
8. Step 7 - Configuring the Layers.....	21
9. Step 8 - Creating the Interior Walls.....	27
10. Step 9 - Interior Wall Cleanup.....	37
11. Step 10 - Adding Door Cutouts Layer.....	41
12. Step 11 - Create Door Cutouts.....	45
13. Step 12 - Adding the Doors Layer.....	56
14. Step 13 - Adding the Doors.....	59
15. Step 14 - Adding the Fireplace Layer.....	69
16. Step 15 - Adding the Fireplace.....	70
17. Step 16 - Adding the Stairs Layer.....	76
18. Step 17 - Adding the Stairs.....	77
19. Step 18 - Adding the Bathroom Layer.....	86
20. Step 19 - Adding the Bathroom Fixtures.....	87
21. Step 20 - Adding the Kitchen Layer.....	90
22. Step 21 - Adding the Countertops.....	91
23. Step 22 - Adding the Appliances.....	94
24. Step 23 - Adding the Dimensions Layer.....	102
25. Step 24 - Adding the Dimension Lines.....	103
26. Step 25 - Adding Room Names Layer.....	106
27. Step 26 - Adding the Room Names.....	107

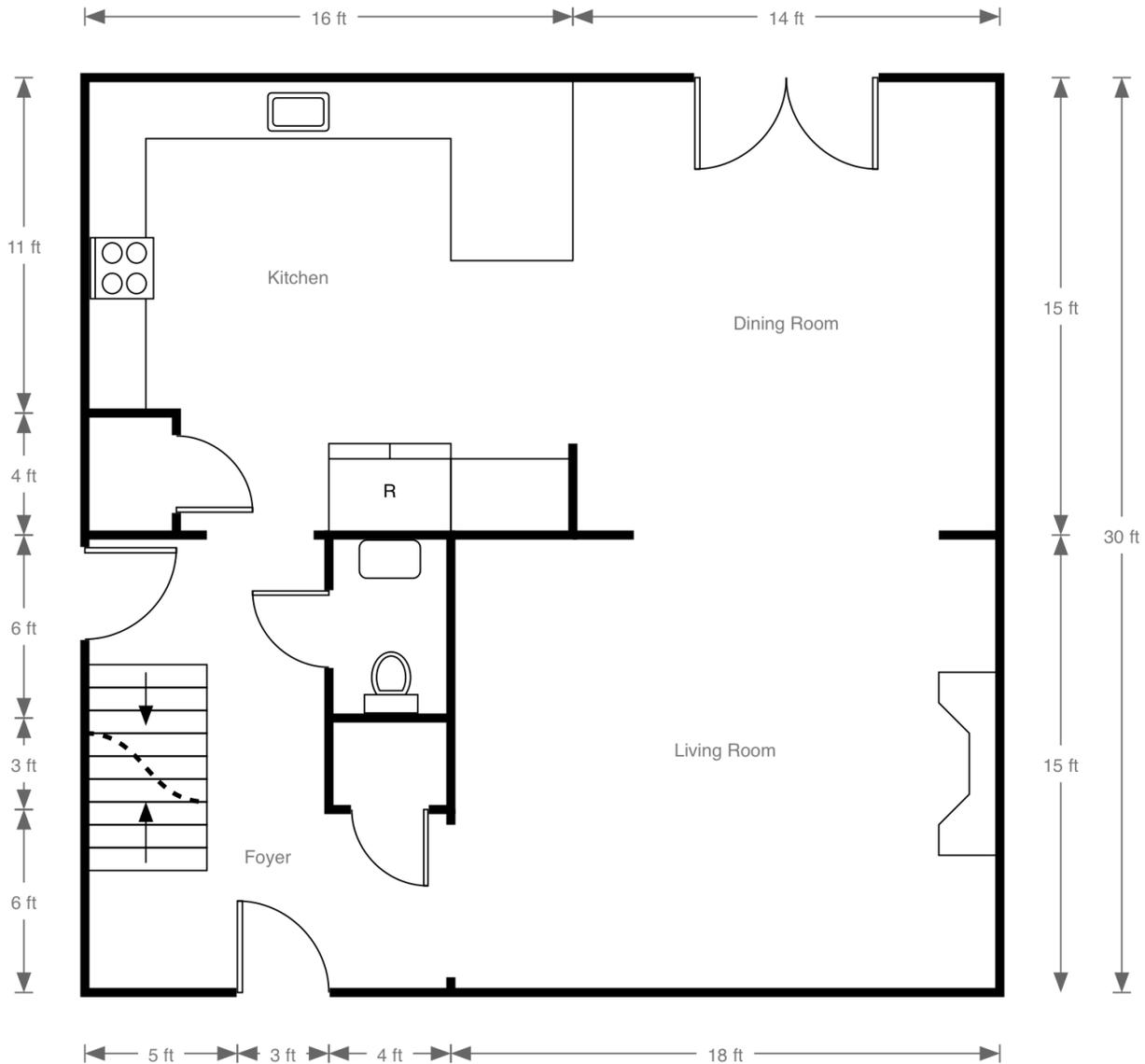
1. Introduction

Note: This tutorial is a living document and will be updated and edited based on user feedback and comments. If something isn't clear, or you have questions, don't hesitate to contact us and we'll work on updating it to answer your questions.

Overview

This tutorial is designed to walk you through the process of creating the following floor plan using TouchDraw for Android.

TouchDraw for Android Floorplan Tutorial

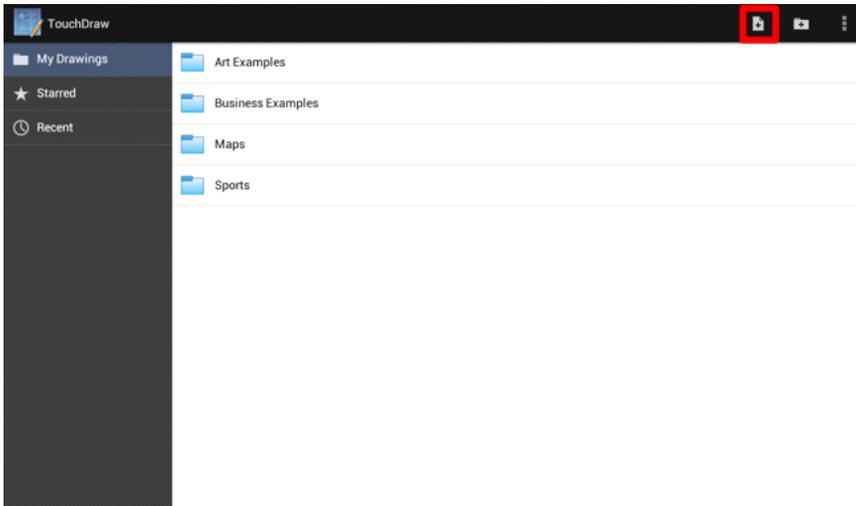


This tutorial was originally created using version 1.0 of TouchDraw for Android. Depending on what version of TouchDraw you are using, there may be some minor differences between what the screenshots show and what is seen within the version of TouchDraw used for floor plan creation.

If you want to download the final file to see how it was constructed, you can download it here:
[floor_plan_example.t2d](#)

2. Step 1 - Creating a New Drawing

The first step in this tutorial is to create a new drawing. To do this, press on the **Create Drawing Button** in the [Drawing Chooser](#):



[Continue to Next Step](#)

3. Step 2 - Selecting the Units

The second step is to configure the **Unit of Measure** for the drawing. Depending on where you live in the world, TouchDraw will create a new drawing in *Inches* or *Centimeters*. For this tutorial, we are going use *Feet* as the unit of measure; however, all of the steps are equally applicable to other units of measure.

To configure the units of measure for the drawing, first open the

[Info Menu](#)

by pressing the

Info



*

*

Button

*

* in the

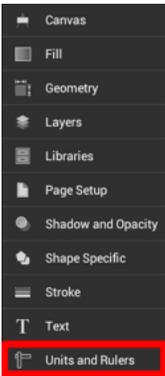
[Top Toolbar](#)

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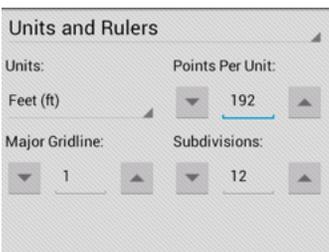
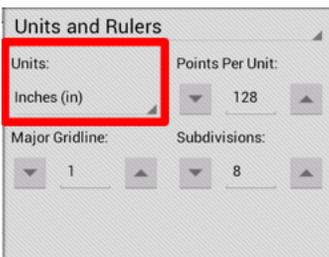


Once the **Info Menu** has been opened, select the **Units and Rulers** option.

TouchDraw for Android Floorplan Tutorial

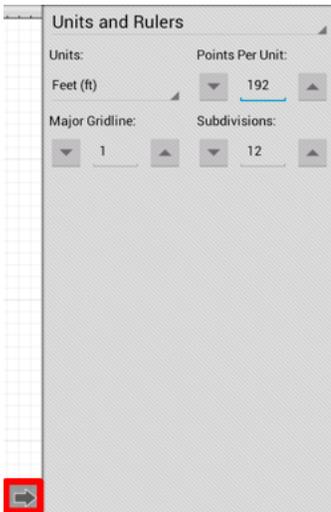


Tap on the **Units** section of the [Units and Rulers Panel](#) to change the current setting of Inches to Feet. Select **Feet** from the provided list of options.



Once **Feet** has been selected as the unit of measurement, press on the **Hide Sidebar Button** in the bottom left corner of the [Sidebar](#) to dismiss the **Units and Rulers Panel**.

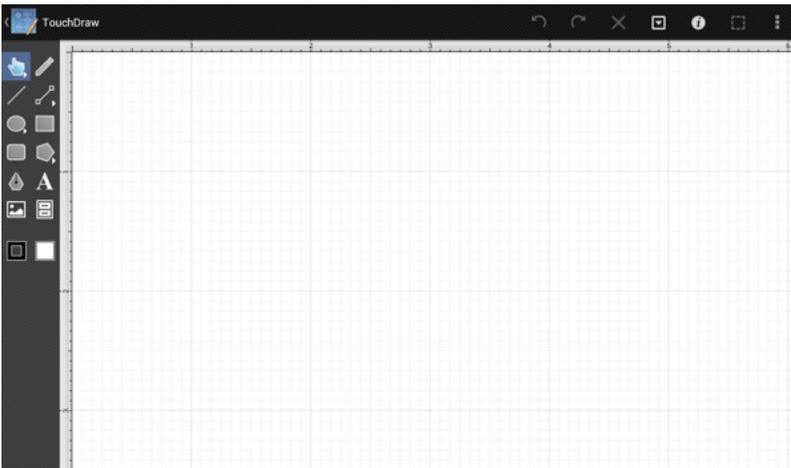
TouchDraw for Android Floorplan Tutorial



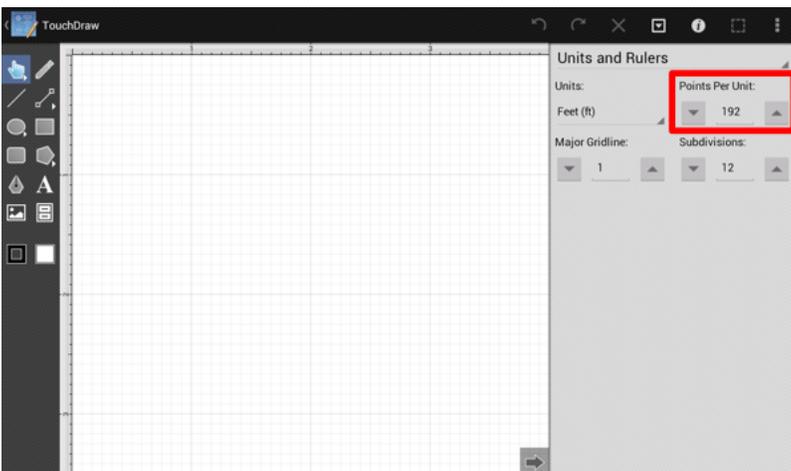
[Continue to Next Step](#)

4. Step 3 - Configure Points Per Unit

After the **Unit of Measure** has been changed, the **Drawing Canvas** will have 12 subdivisions for each inch in feet rather than the original 8 subdivisions shown for inches. This is appropriate; however, at 100% zoom only (approximately) 5' x 3' are visible on the screen.



The scale of the drawing must be adjusted before beginning to draw the floor plan. In TouchDraw for Android this is (currently) done through the **Points Per Unit** option, which is accessed by opening the **Info Menu** and then selecting the **Units and Rulers** option to open the **Sidebar** as performed in the previous step.



TouchDraw for Android Floorplan Tutorial

The **Points per Unit** setting is highlighted in the above screenshot. Simple math is necessary to calculate the appropriate value for this setting.

First, the screen resolution used for this Android tutorial is 1024 x 768.

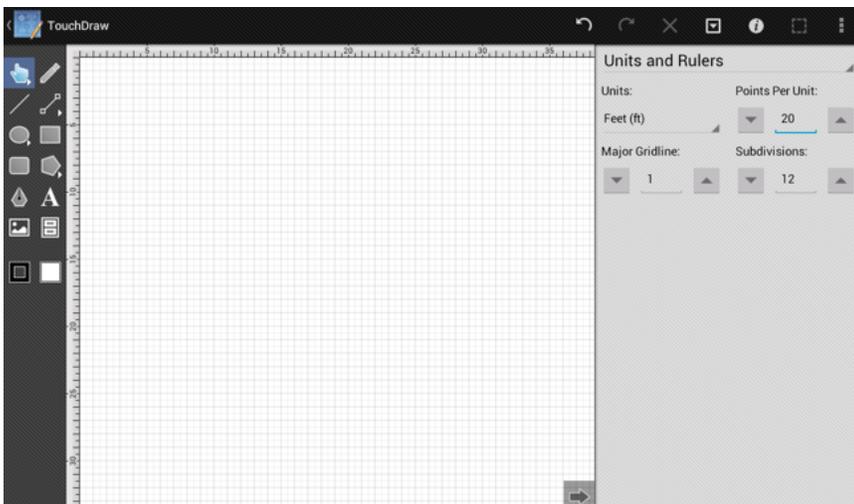
Second, the floor plan being drawn is 30' x 30'.

Third, taking into consideration that a little bit of a margin will be wanted on the side of the drawing, the drawing view should be approximately 50 feet wide.

Fourth, the appropriate **Points per Unit** can be calculated by dividing 1024 (the number of horizontal pixels in the screen) by 50 (the width of the drawing in feet).

This calculation supplies a value of 20.48; however, we can simply round to the nearest integer and use 20 for setting the **Points Per Unit**. If a greater screen resolution will be used such as 1280 x 800, simply divide the first number by 50 to obtain the correct **Points Per Unit** value, which provides the value of 25.6 or 27 (rounded up). For the sake of simplicity, the traditional screen resolution of 1024 x 768 is used in this tutorial.

Tap on the **Down Button** next to the Points Per Unit setting in the [Units and Rulers Panel](#) to decrease this value by one or tap on the value itself to type in the new **Points Per Unit** value.

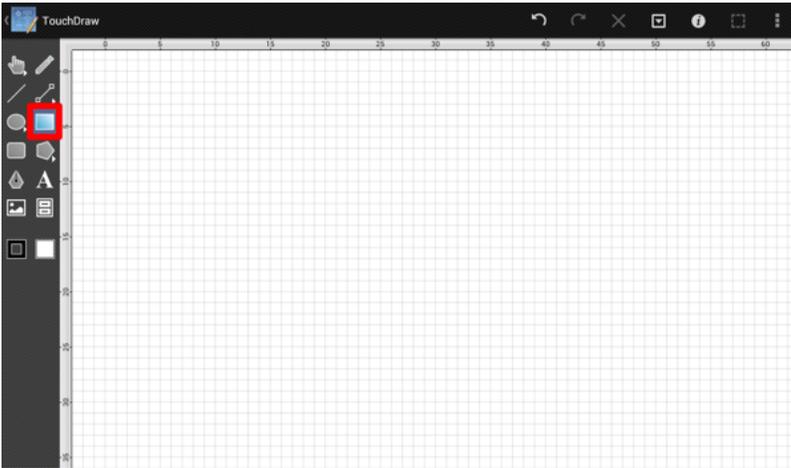


A future version of TouchDraw will perform the above calculation automatically by allowing the scale to be selected from a list.

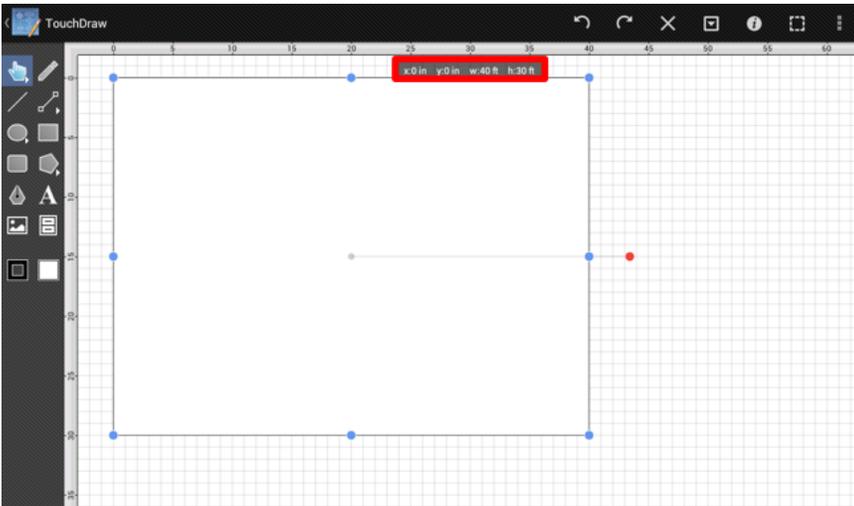
[Continue to Next Step](#)

5. Step 4 - Creating the Exterior Walls

Start by creating a simple rectangle 30 feet wide by 30 feet deep for the exterior walls of the floor plan. This can be done by selecting the **Rectangle Tool** in the [Drawing Toolbar](#) on the left hand side of the screen.



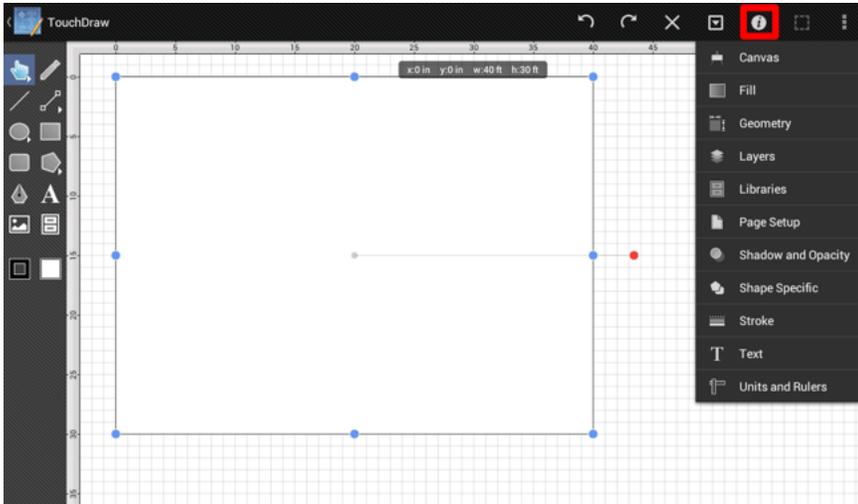
Touch and drag on the [Drawing Canvas](#) to create the rectangle. TouchDraw provides visual feedback by showing the size of the shape at the top of the drawing canvas as the rectangle is drawn.



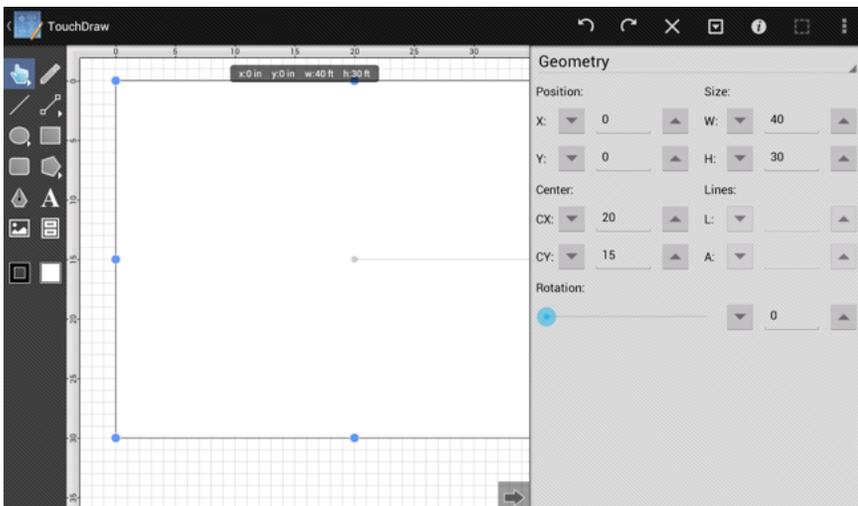
If the rectangle is not exactly 30 ft x 30 ft on the first try, it is not a problem and one of many of the tools in

TouchDraw for Android Floorplan Tutorial

TouchDraw can be used to resize the shape. In the screenshot above, the rectangle is drawn approximately 10 ft too wide. The [Geometry Panel](#) in the [sidebar](#) will be needed to modify the size of the rectangle. Use the [Info Menu](#) to access this panel.



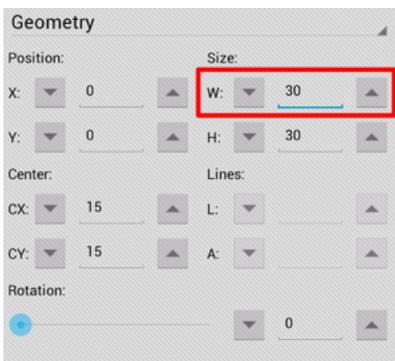
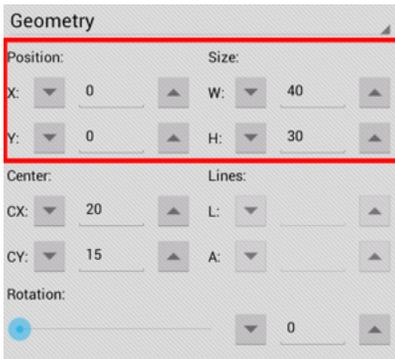
Tap on the **Geometry** option in the [Info Menu](#). The **Geometry Panel** will appear on the right hand side of the drawing canvas and can be used to edit the size of the currently selected shape.



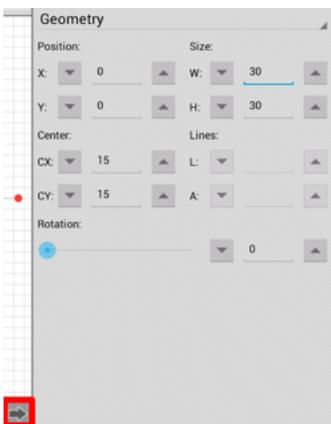
For a rectangle, the **Geometry Panel** contains 4 different values: x, y, w, h. **X** and **Y** represent the position of the upper left hand corner of the selected shape in the drawing canvas. **W** and **H** are the width and height of the shape in the currently selected unit of measure.

Either adjust the values by pressing on the **up** and **down** buttons or by tapping on the value, which will bring

up the keyboard for editing the value directly.

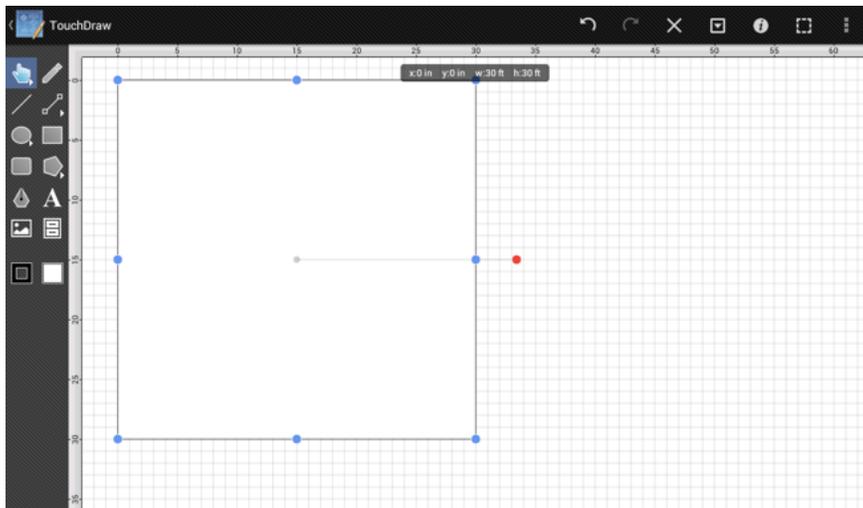


Tap on the **Hide Sidebar Button** located at the bottom of the **Geometry Panel** to dismiss it.



The screen should appear as shown below after changing the width of the rectangle to 30:

TouchDraw for Android Floorplan Tutorial



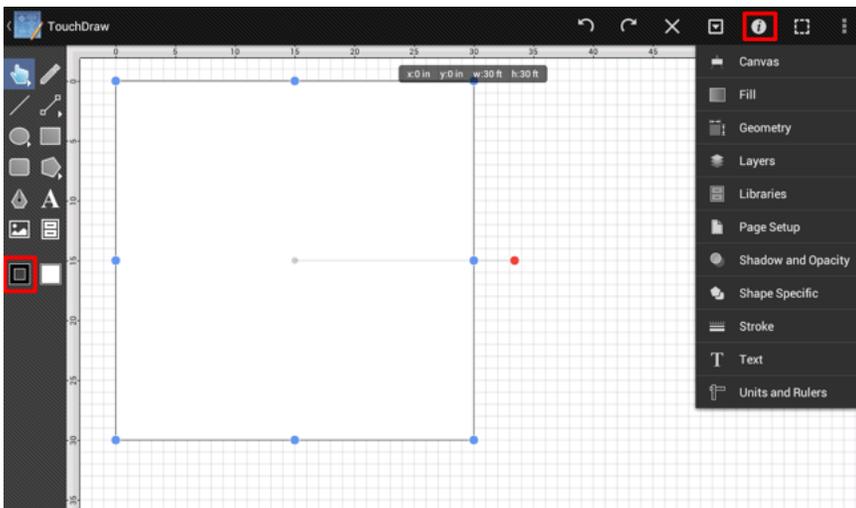
[Continue to Next Step](#)

6. Step 5 - Styling the Exterior Walls

The next step is to change the styling (line thickness) of the exterior walls to make it obvious that these are walls (as opposed to other details being added to the drawing in subsequent steps).

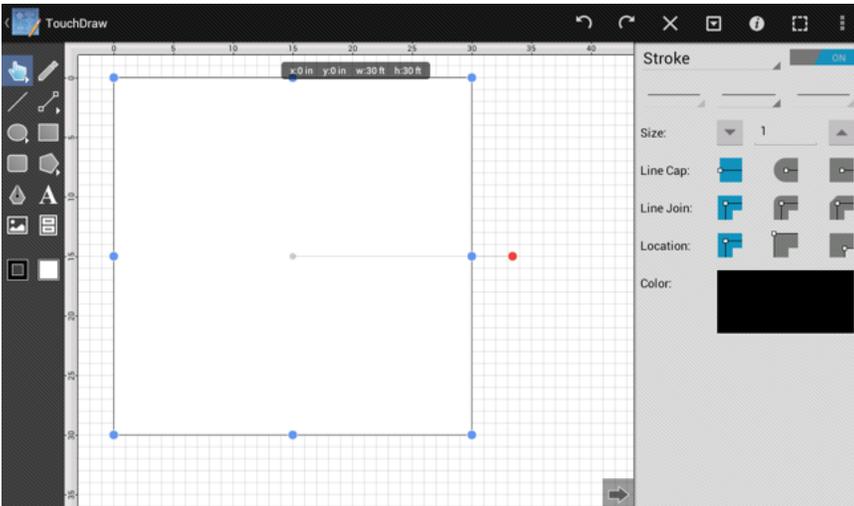
First, make certain the rectangle drawn in the previous step is still **selected**. Eight blue handles and one red handle will be visible if the figure is selected. Tap on the rectangle if it is not already selected.

Second, open the **Stroke Panel** to change the line thickness. It can be opened by either pressing on the button highlighted below within the **Drawing Toolbar** or by pressing on the **Info Button** in the **Top Toolbar** and then selecting the **Stroke** option from the **Info Menu**.



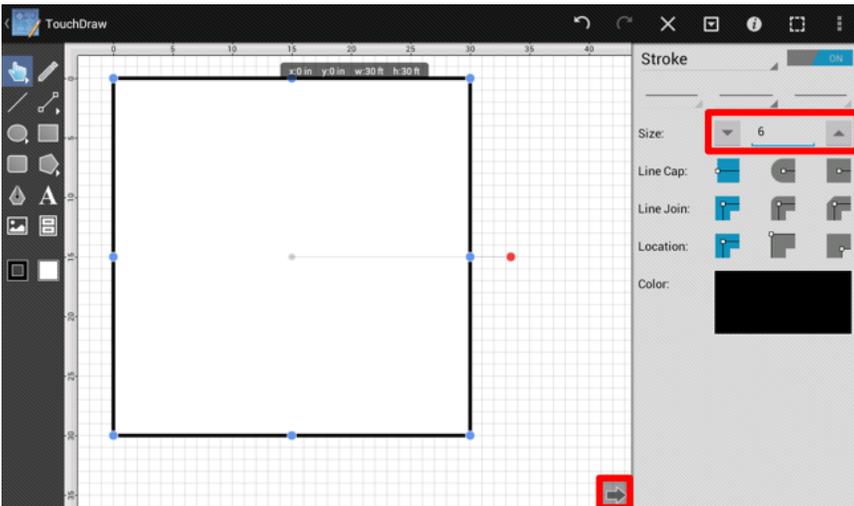
The **Stroke Panel** will open once the above button has been pressed or the **Stroke** option has been selected.

TouchDraw for Android Floorplan Tutorial



Use the [Stroke Size](#) buttons and text fields to change the value for the thickness of the line. As with other settings in each [sidebar](#) panel, use the **up** and **down** buttons to increment the value one by one or tap in the text field to bring up the keyboard and edit the value directly.

For the purposes of this tutorial, the **Stroke Size** (line thickness) should be changed to 6. Tap on the **Hide Sidebar Button** (highlighted in red below) at the bottom of the [Stroke Panel](#) to dismiss it after making this change.



Even though not all shown attributes are currently being used, these additional stroke (line) attributes can be changed from this panel as well.

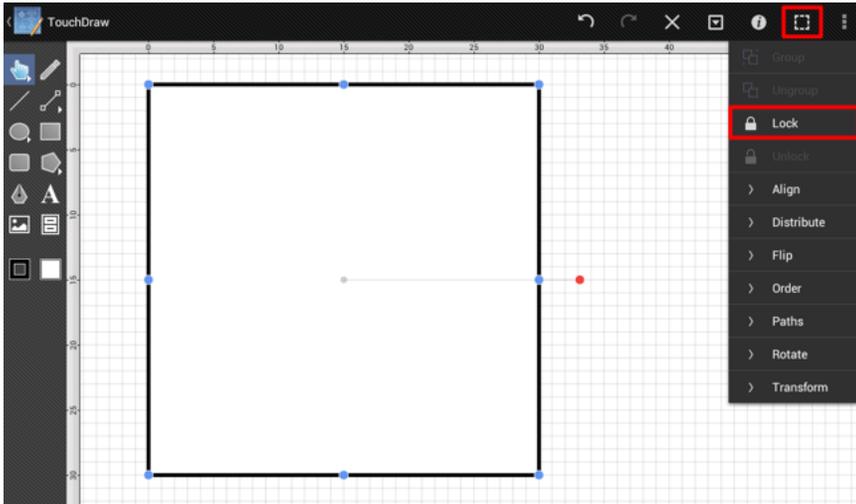
[Continue to Next Step](#)

7. Step 6 - Locking the Exterior Walls

Once the shape has been created and is positioned correctly, it is good practice to **lock** the shape to prevent it from being inadvertently moved.

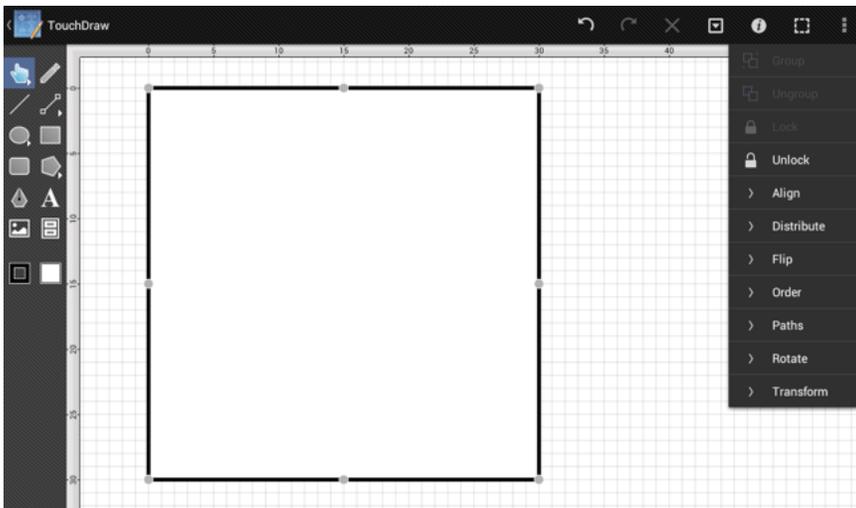
First, make certain the drawn rectangle is still **selected**.

Second, open the **Selection Menu** and select the **Lock** option, as shown below.



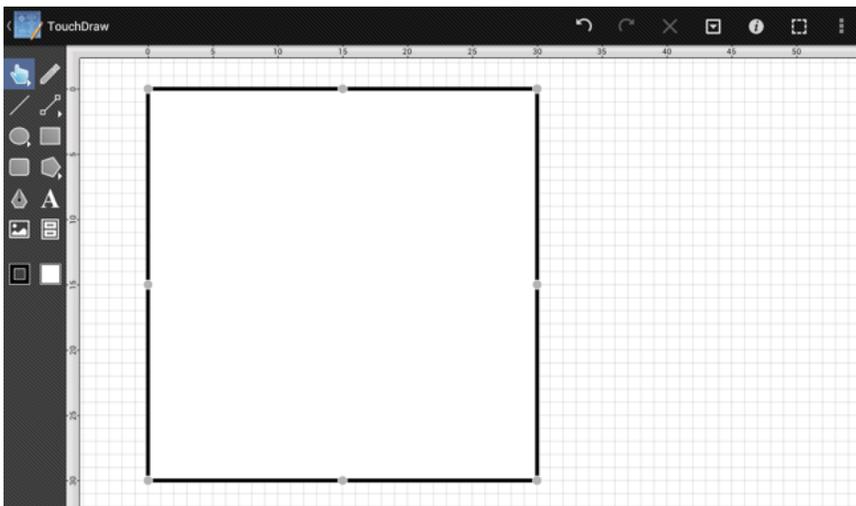
After the shape has been locked, the options in the **Selection Menu** will change.

TouchDraw for Android Floorplan Tutorial



This is because all of the menus in TouchDraw are _contextual_ and only show valid options that apply to the currently selected figure(s).

Second, once the **Selection Menu** has been dismissed, you will notice the handles for the shape are no longer blue and have changed to gray. This is a visual indication that the currently selected shape is locked and cannot be moved.



[Continue to Next Step](#)

8. Step 7 - Configuring the Layers

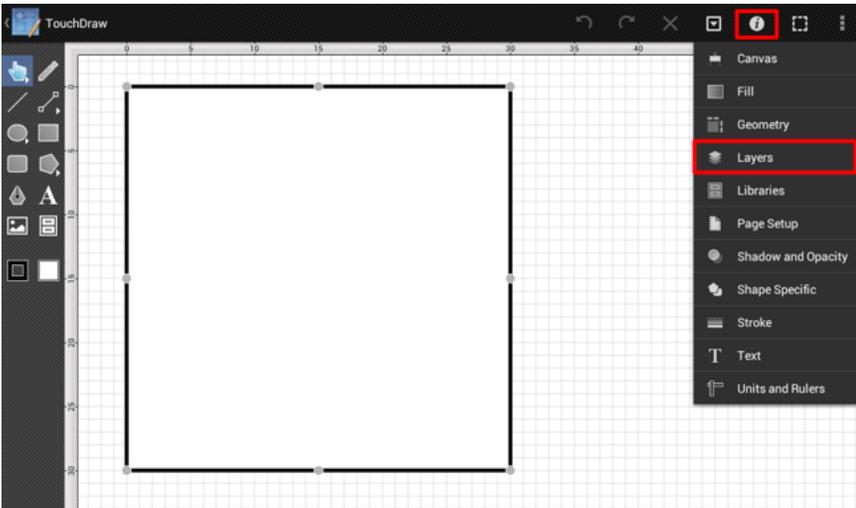
In order to organize the drawing better and allow editing of shapes that overlay other shapes without risking selecting objects within the background, we will use the layers feature of TouchDraw. Imagine a stack of paper where each layer is like a sheet of paper in that stack. One of those sheets of paper can be drawn without impacting what's on the other sheets of paper; however, where layers differ is that layers are like transparent pieces of paper. One sheet can be drawn while seeing what is on the sheets above and below it without impacting them (if other layers are [locked](#)).

Right now, only one layer resides within the drawing (which has the default name "Layer 1"); however, when the tutorial is completed, the drawing will have a total of 10 layers:

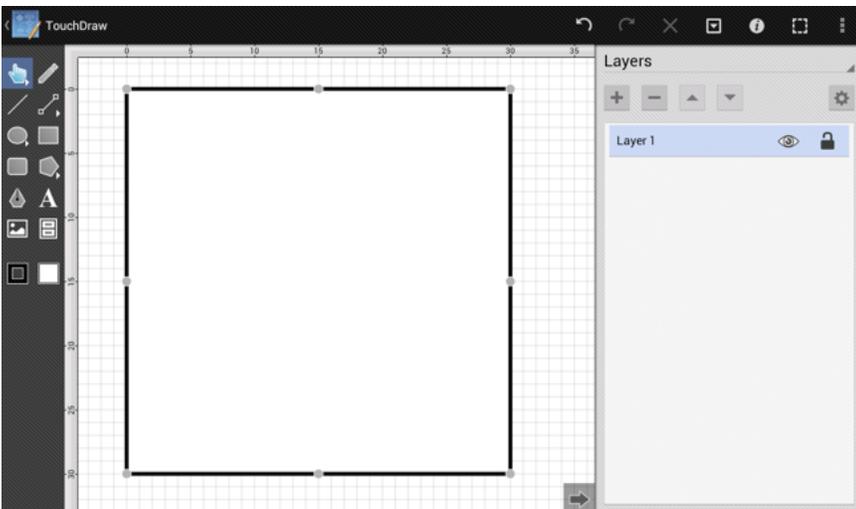
- 1Exterior Walls
- 2Interior Walls
- 3Door Cutouts
- 4Doors
- 5Stairs
- 6Bathroom Fixtures
- 7Fireplace
- 8Kitchen
- 9Dimensions
- 10Room Names

Open the [Layers Panel](#) to begin setting up the layers. This can be done by pressing on the **Info Button** in the [Top Toolbar](#) (highlighted below). Open the [Info Menu](#) and then select the **Layers** option.

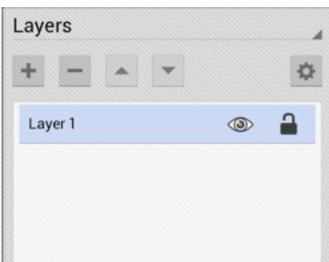
TouchDraw for Android Floorplan Tutorial



Once the **Layers Panel** has been opened, the **Drawing Editor** will appear as shown below:



The **Layers Panel** currently lists Layer 1 as the only layer in the drawing.

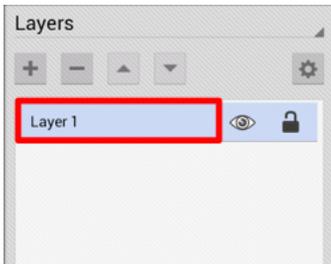


Two icons (buttons) reside to the right of the layer name. The first button is both an indicator and toggle for

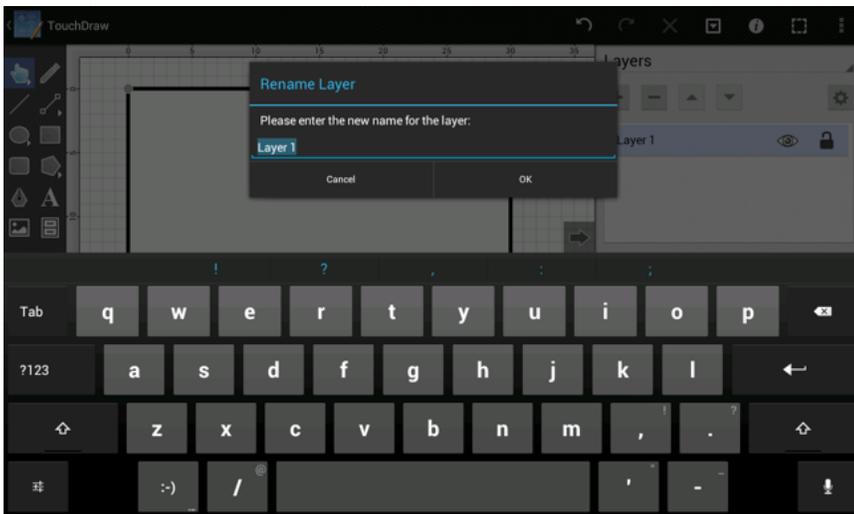
TouchDraw for Android Floorplan Tutorial

whether or not that specific layer is locked. The second button is both an indicator and toggle for whether or not that layer is visible. When a layer is **locked** (and **visible**) the contents of that layer can be seen; however, it will not be able to be selected or edited. This is a useful option for drawing over something in the background without worrying about accidentally selecting or modifying it.

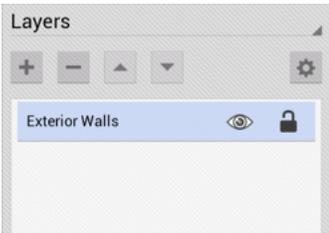
First, rename *Layer 1* to **Exterior Walls**. This process can be started by performing a triple tap on Layer 1 in the **Layers Panel**.



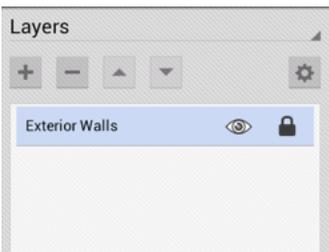
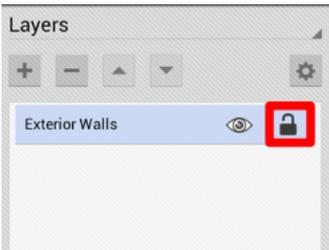
After triple tapping on the layer, a popover window will appear for renaming the layer, as shown below. Enter the words **Exterior Walls** and then press on **OK** to complete the rename.



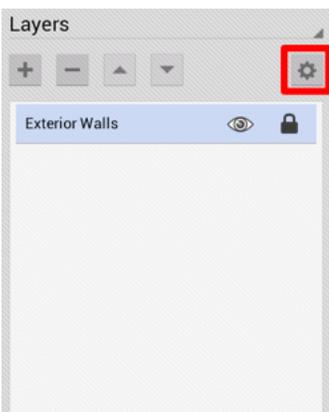
The **Layers Panel** will appear as shown below once the rename has been completed.

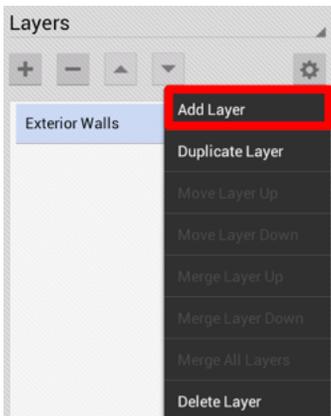


Next, press on the **Lock Icon** (Button) located to the right of the renamed layer to [lock](#) it since no additional changes will need to be made to the **Exterior Walls**.



Creating a layer for the **Interior Walls** is the next step of this process. To accomplish this addition, press on the [Layers Settings Menu](#) located in the upper right corner of the [Layers Panel](#) and then select the **Add Layer** option, as shown below.

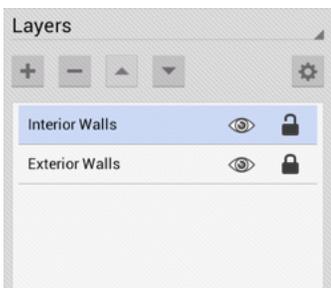




After selecting the **Add Layer** option, TouchDraw will add and select a new layer called **Layer 2**.

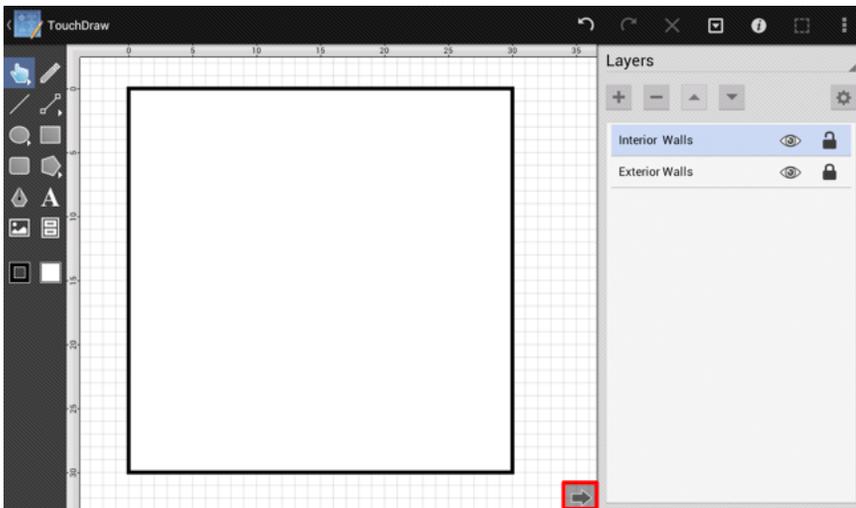


Repeat the steps above for renaming *Layer 1* to *_Exterior Walls_* to rename *Layer 2* to **Interior Walls**.



Press on the **Hide Sidebar Button** at the bottom of the [Layers Panel](#) to close it, as shown below.

TouchDraw for Android Floorplan Tutorial

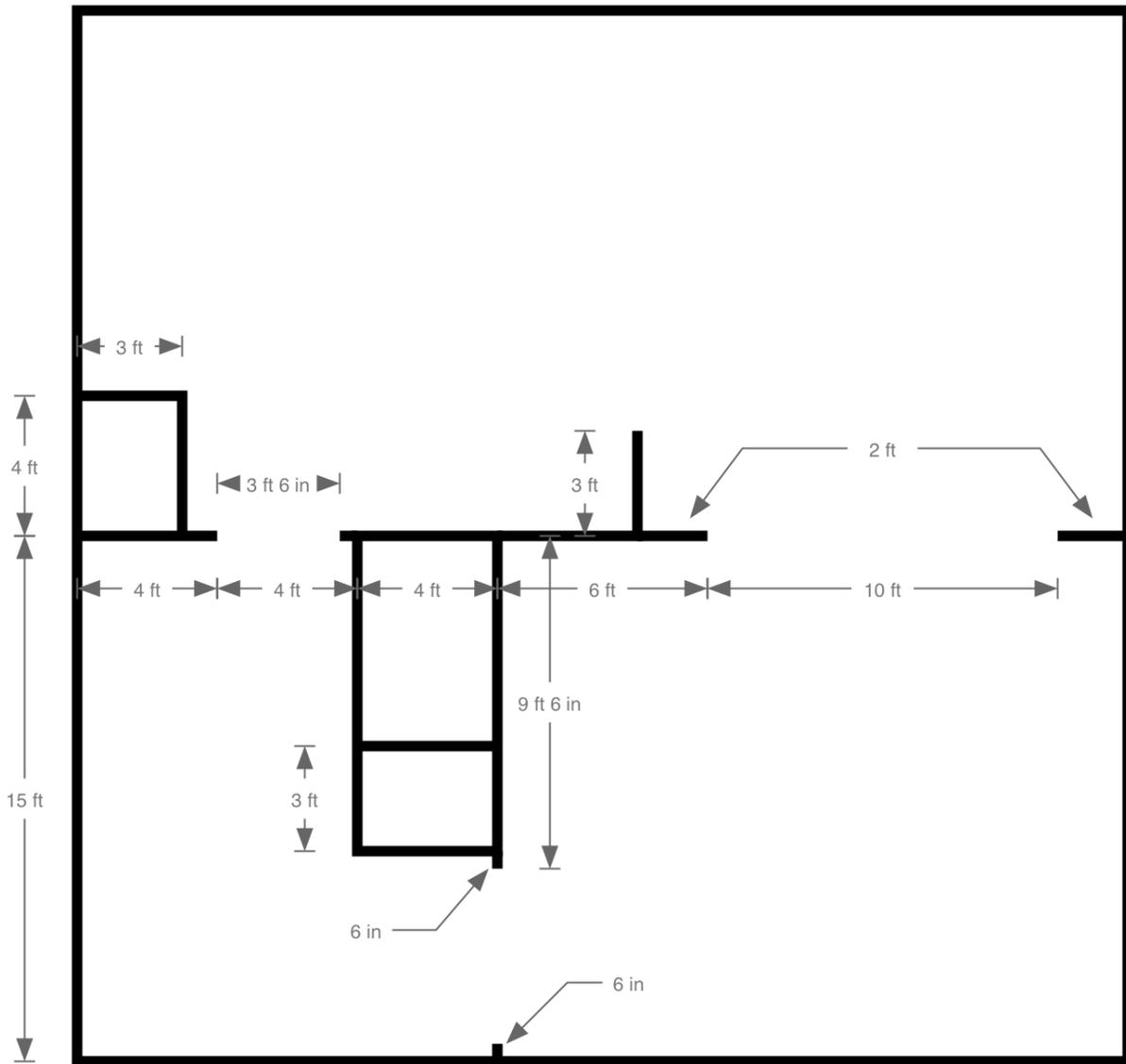


Note: Make certain the **Interior Walls** layer is selected (highlighted in blue) before dismissing the [Layers Panel](#) when completing this step. When the shapes are created in the next step, they will be added to the currently selected layer, which should be the **Interior Walls** layer.

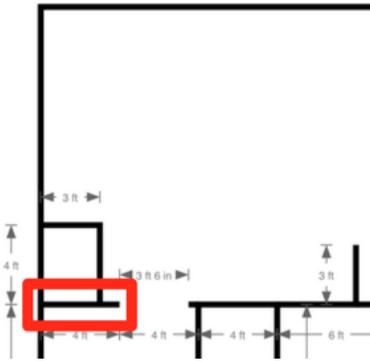
[Continue to Next Step](#)

9. Step 8 - Creating the Interior Walls

The next step is to create the interior walls for the drawing. We created the following diagram to provide a guide as to where the walls should be placed (also done as an additional layer within the TouchDraw drawing):

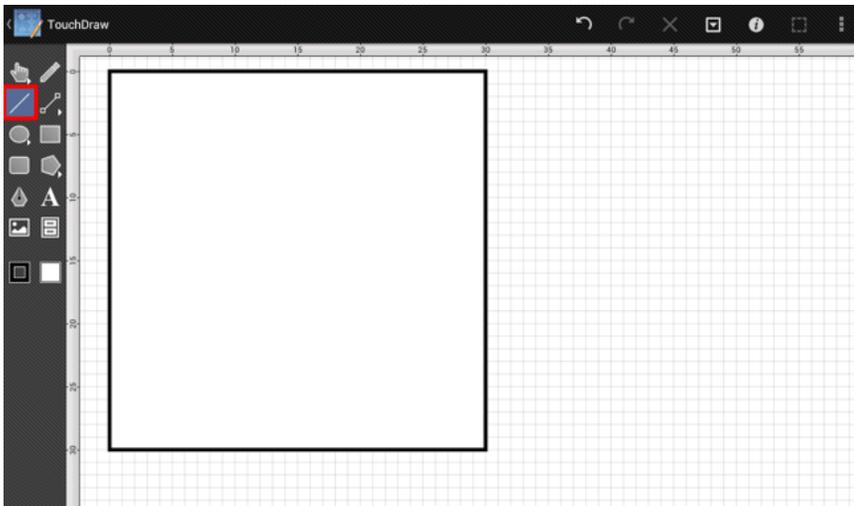


Start by drawing the the wall highlighted below.



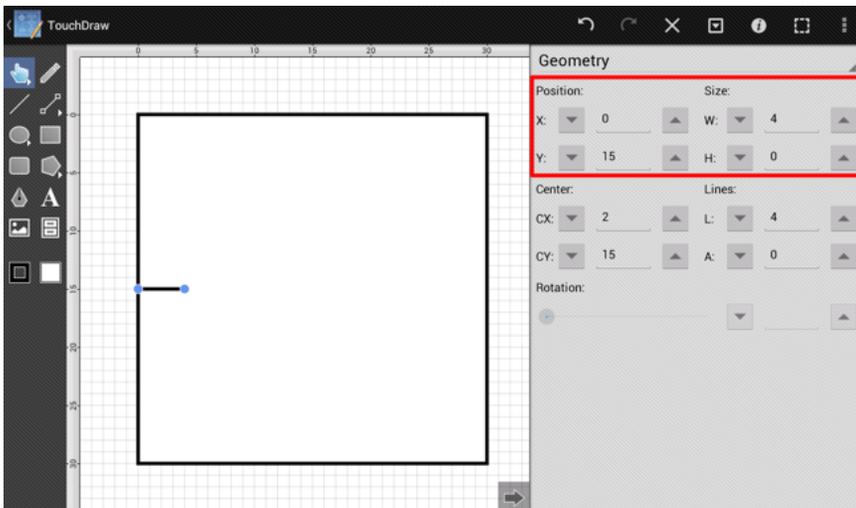
First, as with the exterior walls, the interior walls should be drawn with a line thickness of 6. TouchDraw will remember that the last used stroke size was 6; however, it is good to know that the attributes (stroke, fill, text, etc...) for a shape can be set before creating it. In this case, had the stroke thickness been changed in the meantime, the stroke thickness could be set for all new lines drawn by opening the **Stroke Panel** and setting the [Stroke Size](#) as done previously.

Second, the [Line Tool](#) will need to be used to create the interior walls, as shown by the highlighted item in the screenshot below.



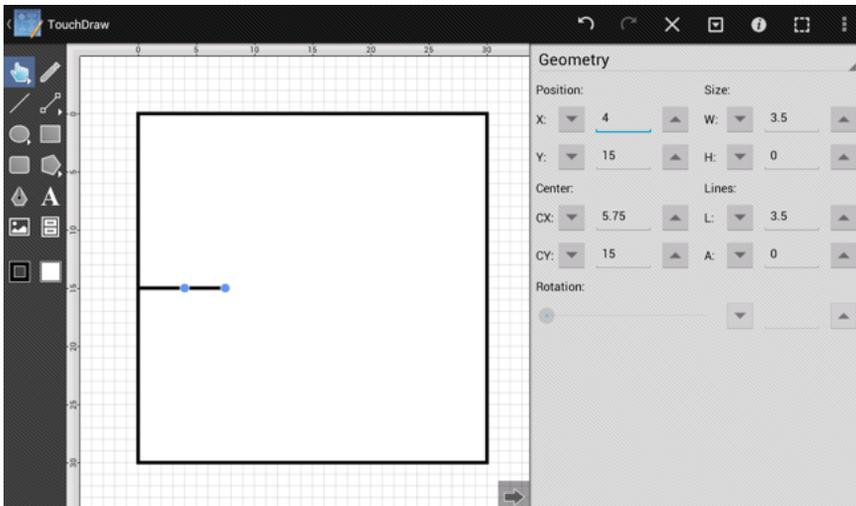
From the dimensions shown above, we know that the first interior wall is 15 ft down from the top left of the drawing (and also 15 ft up from the bottom left) and 4 ft long. As with drawing a rectangle, touch and drag to create a line.

TouchDraw for Android Floorplan Tutorial



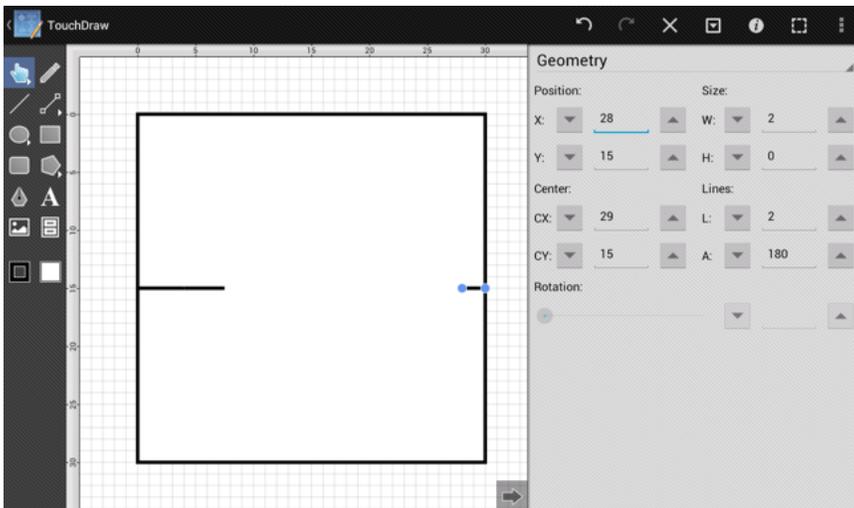
The angle, length, start points, and end points of the line can be edited after it has been drawn. As before, either drag the blue handles or use the [Geometry Panel](#) (as shown above) to edit the location of the line.

Next, we know from the dimensions above that there is a 3 ft 6 in open doorway to the right of that wall. We will draw a temporary line in that space to use as a point of reference for other walls to be drawn later.

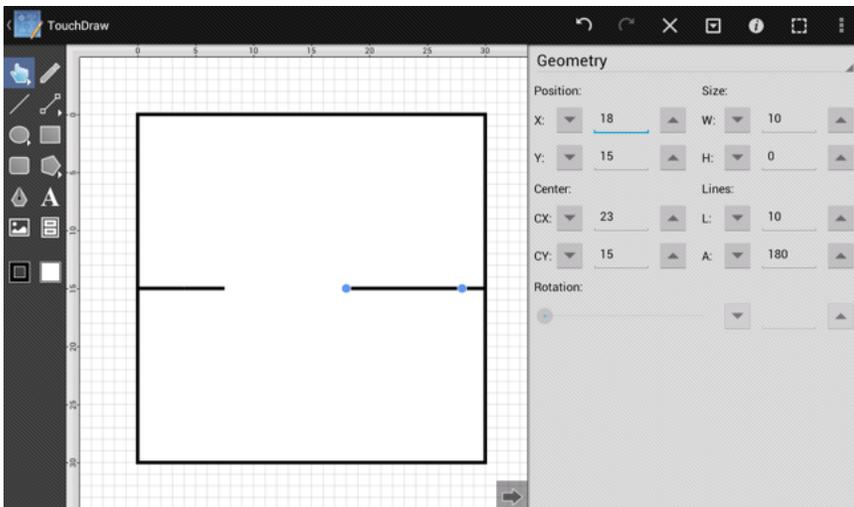


Move to the opposite side of the house and draw the 2 ft wall there.

TouchDraw for Android Floorplan Tutorial

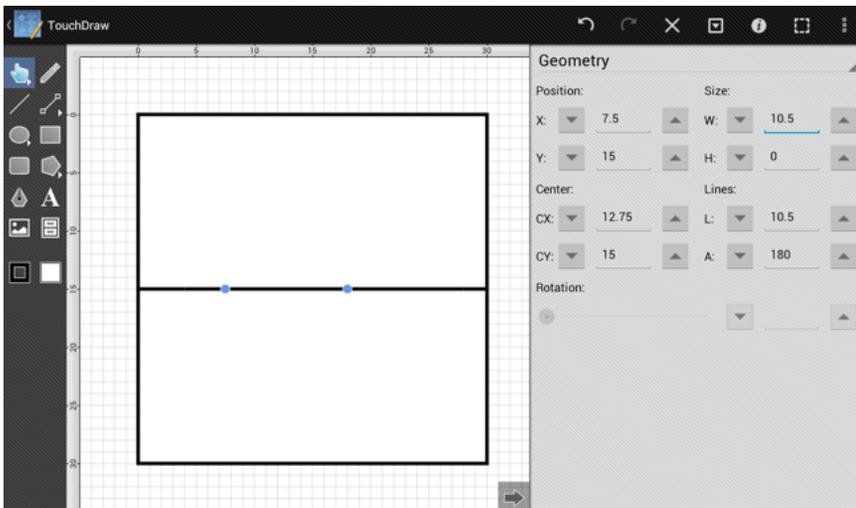


Next, as above, draw another temporary line for the 10 ft opening to the left of that wall.

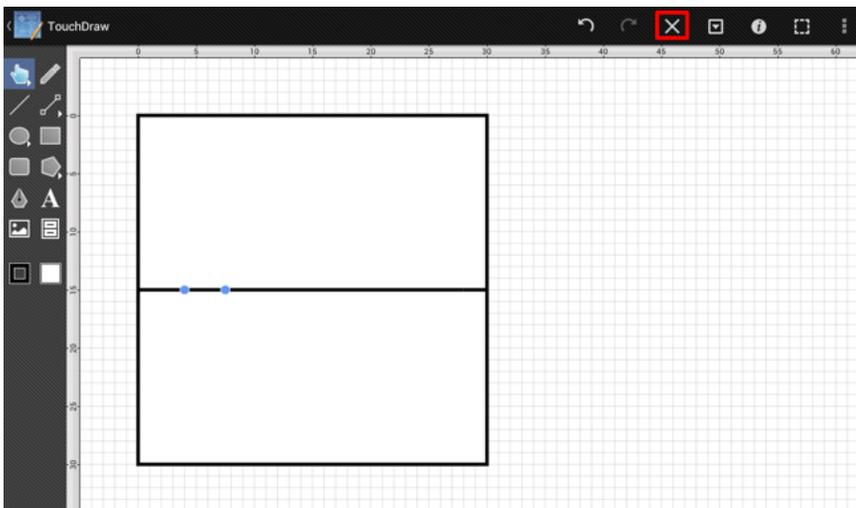


Draw the wall that fills the empty space between the two temporary lines.

TouchDraw for Android Floorplan Tutorial

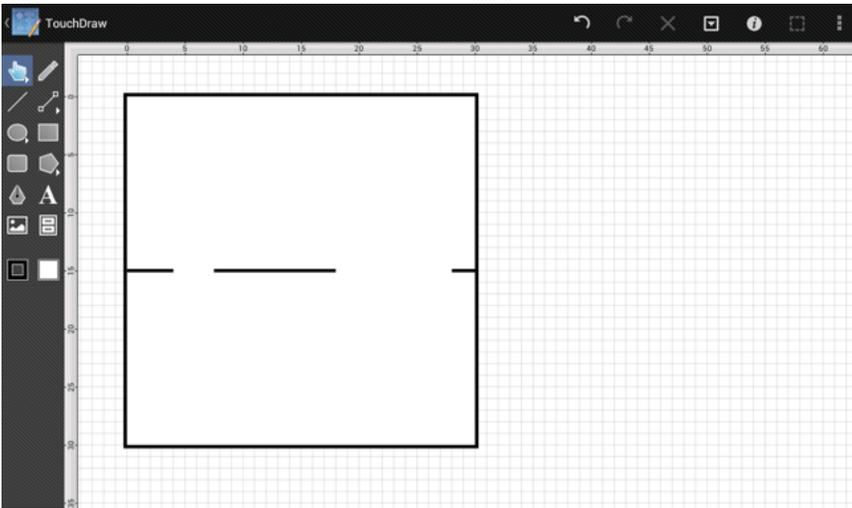


Next, delete the two temporary lines since they are no longer needed. To do this, first tap on one of the lines to select it, and then press on the **Delete Button** (the X) in the **Top Toolbar** to delete the lines from the drawing.

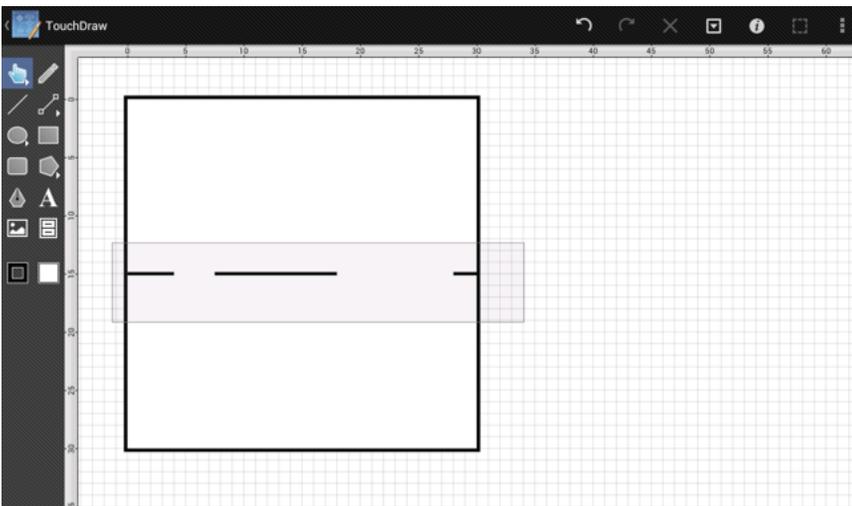


After both temporary segments have been deleted, the drawing should look like the following screenshot example:

TouchDraw for Android Floorplan Tutorial

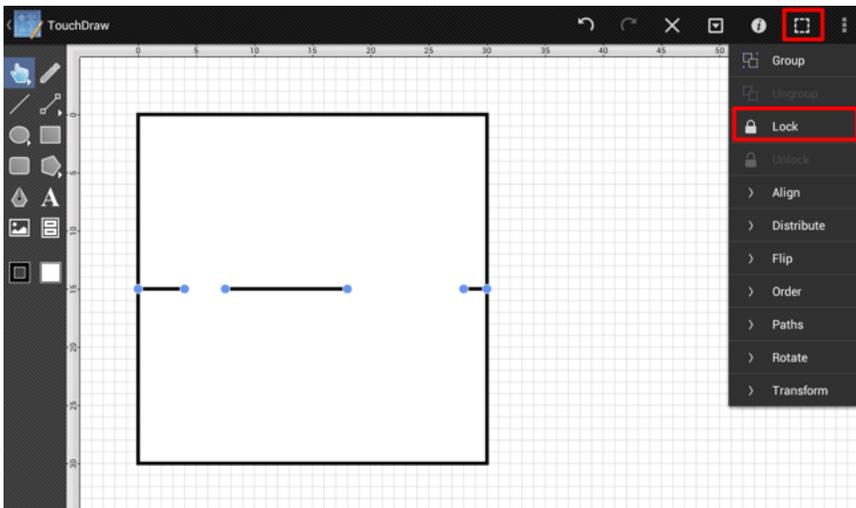


As a matter of good practice, the created walls should now be [selected](#) and [locked](#). They can be locked all at once rather than going through the trouble of locking them one by one. With the [Selection Tool](#) enabled (the one that looks like a pointing finger), perform a **Touch/Drag** gesture combination to draw a rectangle around all of the shapes and select them.

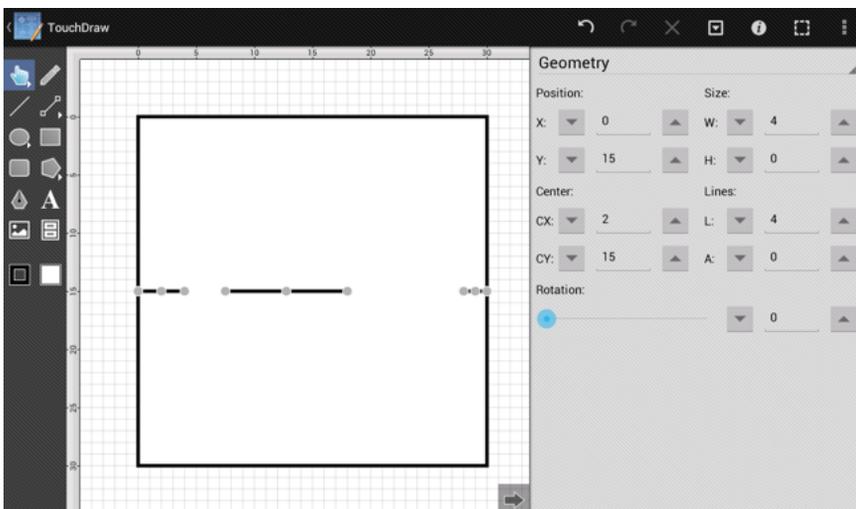


Once all shapes have been selected, open the [Selection Menu](#) by pressing on the **Selection Button** in the [Top Toolbar](#) and then tap on the **Lock** option to lock the figures, as shown below.

TouchDraw for Android Floorplan Tutorial



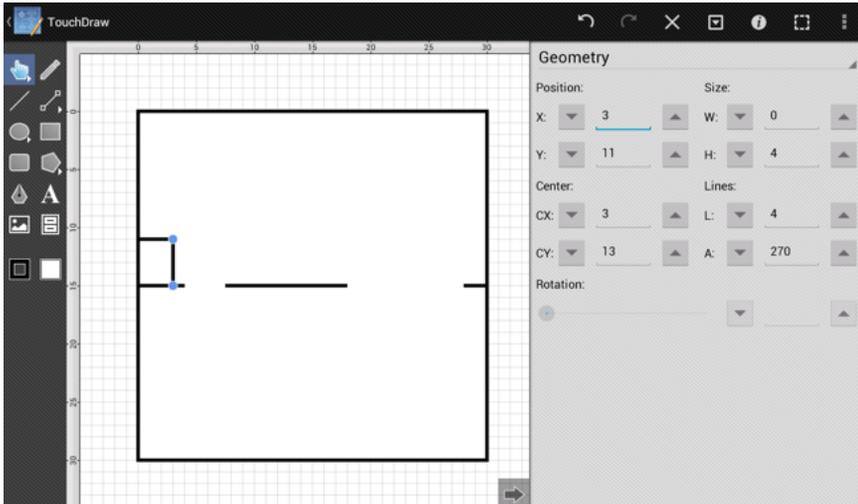
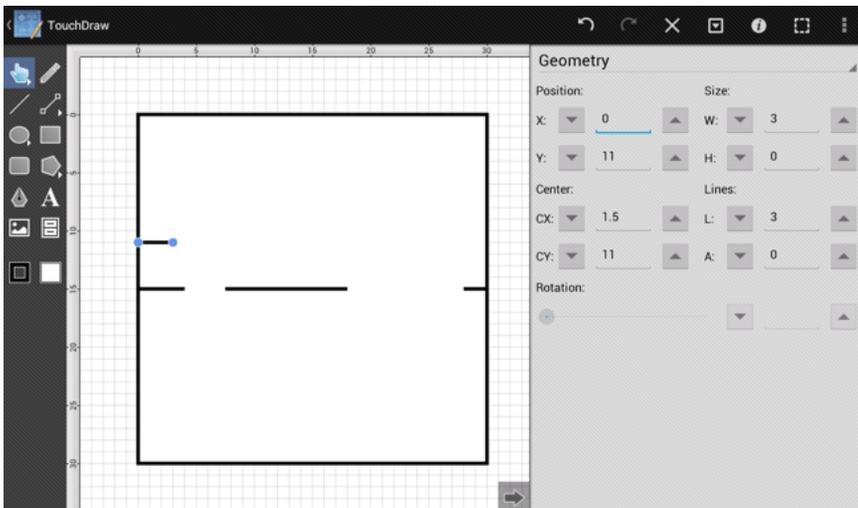
The drawing will appear as shown in the screenshot below once the figures have been locked.



Next, draw the walls for the Kitchen Closet.

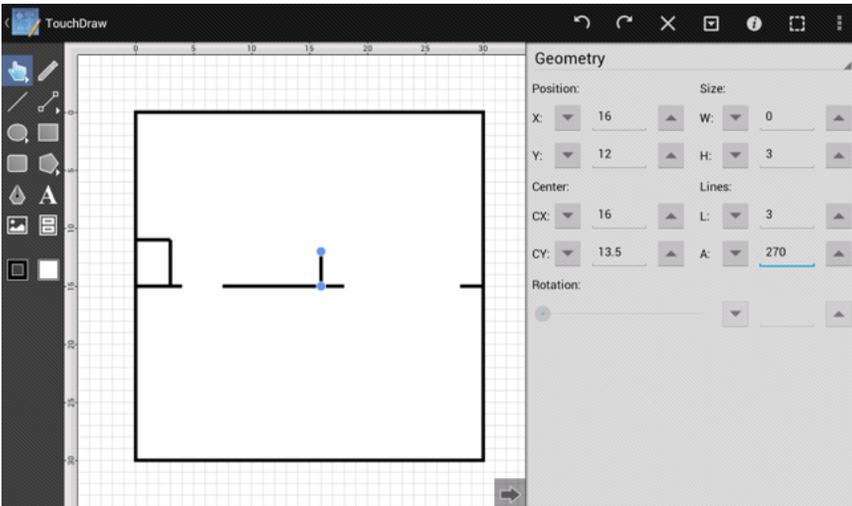
Either use the grid and the ruler as points of reference or draw temporary reference lines to get the proper offset.

TouchDraw for Android Floorplan Tutorial

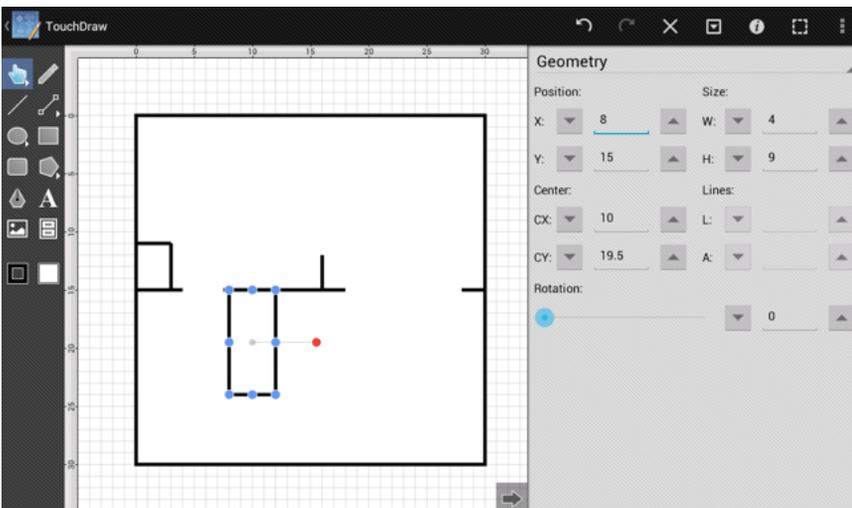


Draw the wall to the right of the refrigerator.

TouchDraw for Android Floorplan Tutorial

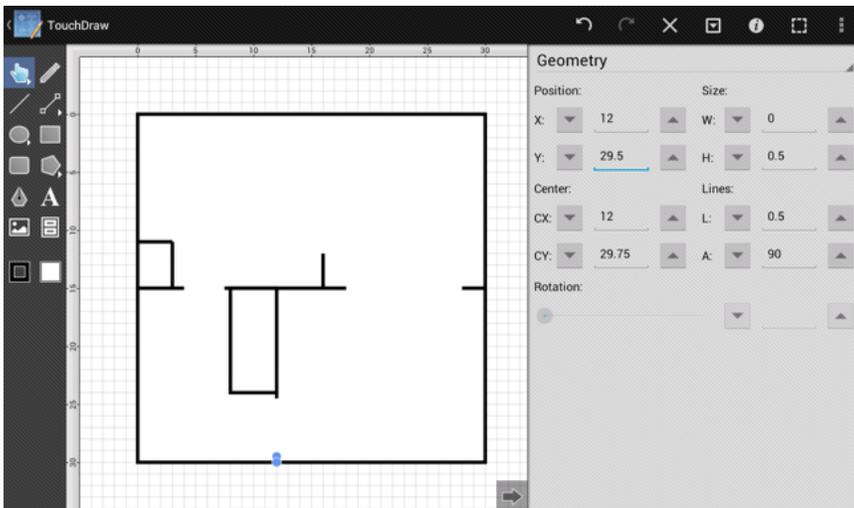


Use the [Rectangle Tool](#) to draw the outline of the front closet and the half bath. (Note, by looking at the dimensions above, we can figure out that this rectangle should be 4ft x 9 ft)

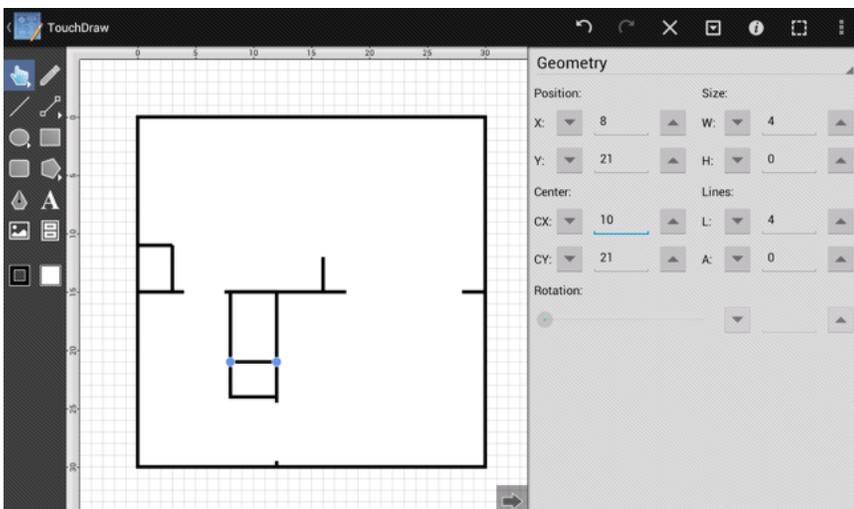


Next, draw the two 6 in walls between the foyer and the living room.

TouchDraw for Android Floorplan Tutorial



Lastly, create the wall between the front closet and the half bath.

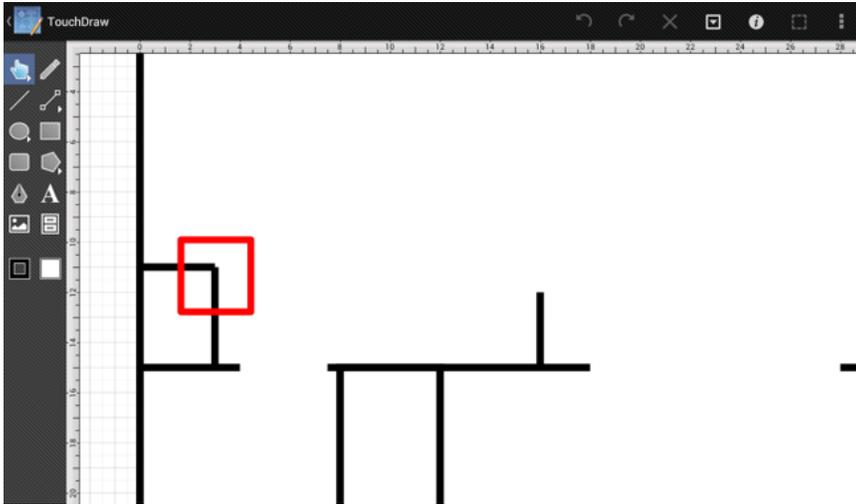


Now all of the lines representing the interior walls have been created.

[Continue to Next Step](#)

10. Step 9 - Interior Wall Cleanup

Upon [zooming](#) in on the kitchen closet, you will notice that while the two endpoints of the lines touch, they do not make a nice squared off corner. This is because each line is an individual object.

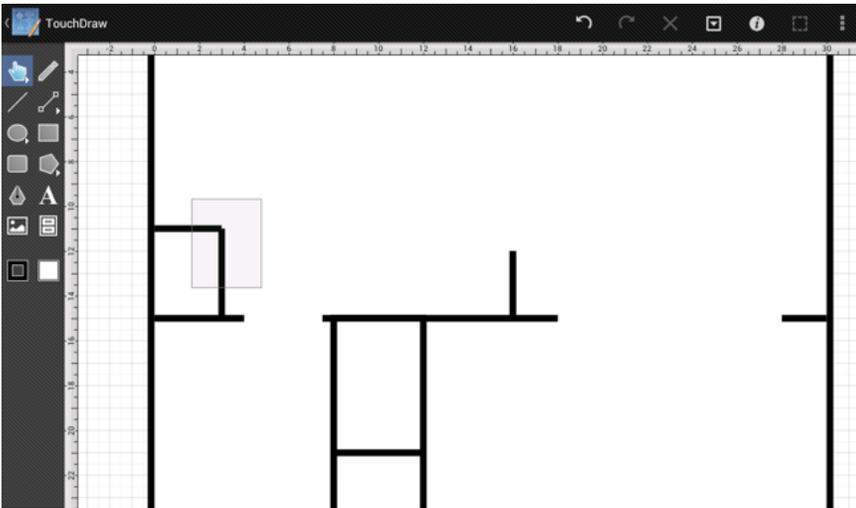


This can easily be fixed within TouchDraw by combining the lines to create a single compound path.

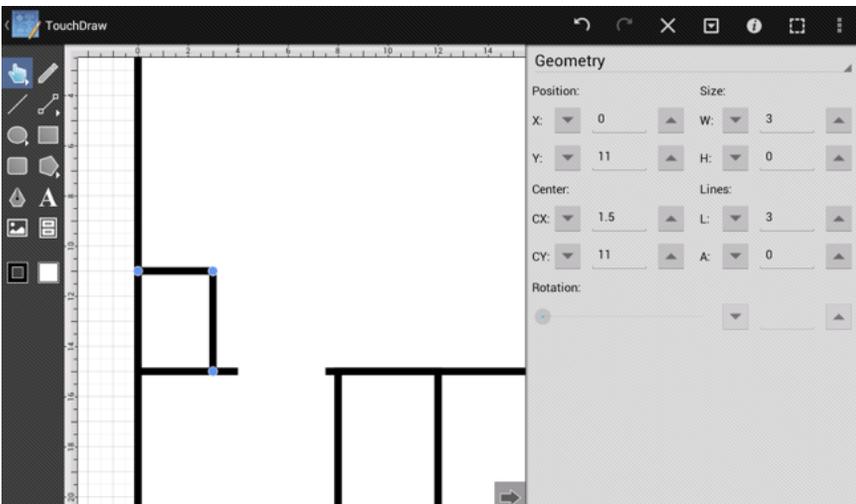
First, select both lines by drawing a selection rectangle that intersects with both lines as done previously. This is the easiest way to select multiple shapes within the TouchDraw application.

Note: As of TouchDraw 1.8.3, if the selection rectangle is drawn from left to right, any object that **intersects** with the selection rectangle will be selected. If the selection rectangle is drawn from right to left, then any object that is **contained within** the selection rectangle will be selected.

TouchDraw for Android Floorplan Tutorial

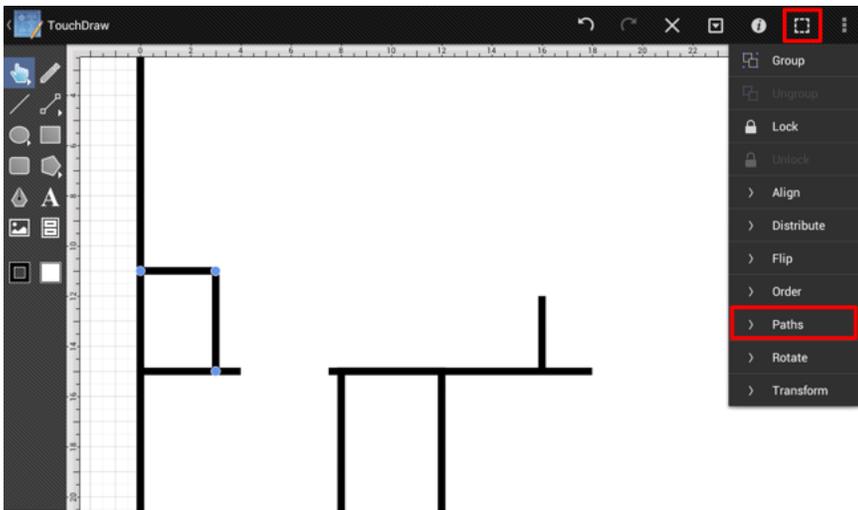


This action will cause both lines to be [selected](#).

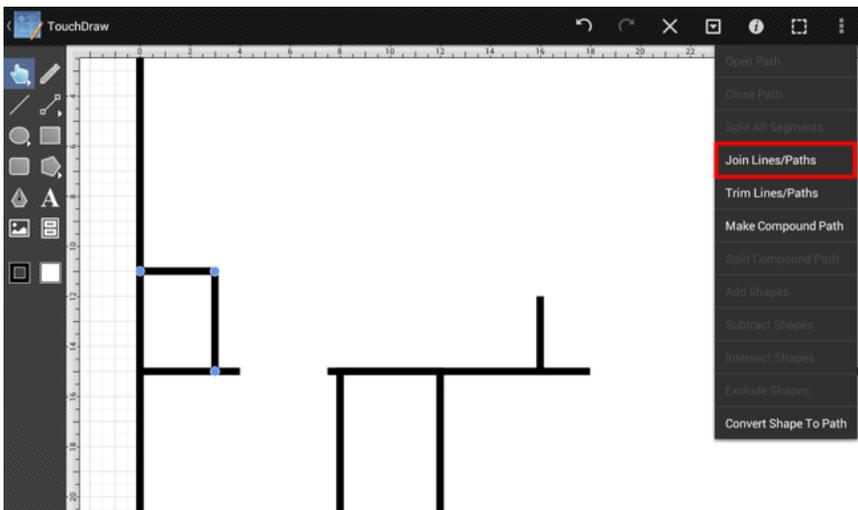


Next, open the [Selection Menu](#) and tap on the **Path** option to combine both of the lines into a single compound path.

TouchDraw for Android Floorplan Tutorial

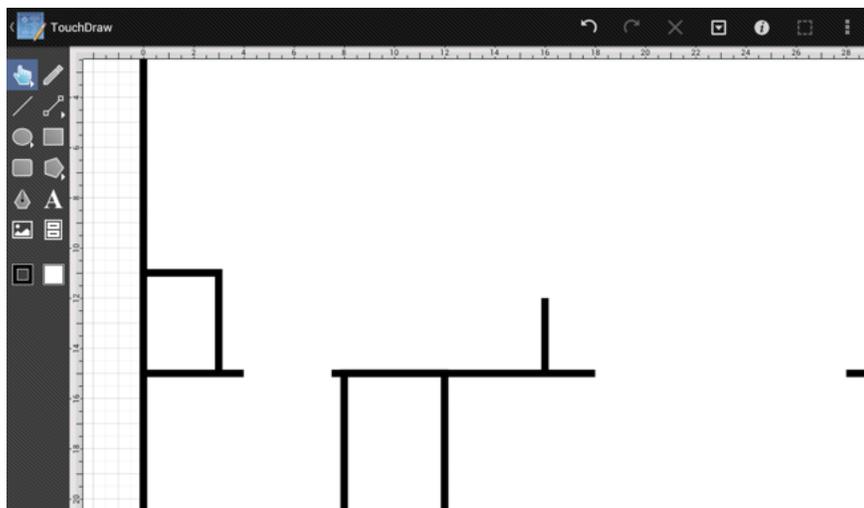


Another menu will open once the **Paths** option has been selected, tap on the **Join Lines/Paths** option in the [Paths Submenu](#):



After executing the **Join Lines/Paths** command and deselecting the newly created compound path, you will see that the corner of the closet is now perfect.

TouchDraw for Android Floorplan Tutorial



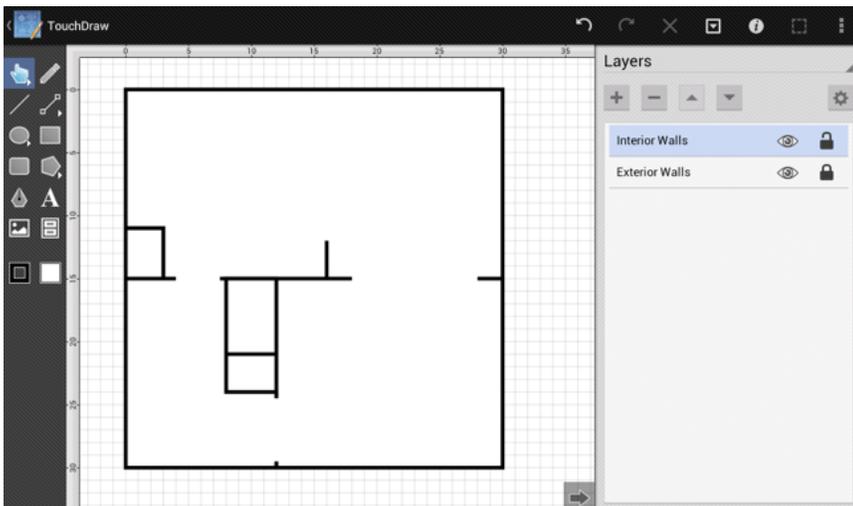
[Continue to Next Step](#)

11. Step 10 - Adding Door Cutouts Layer

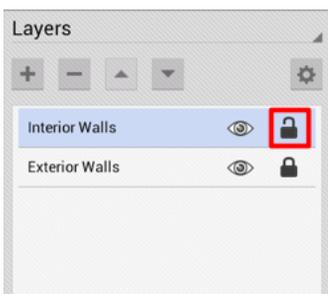
The next step in this process is to create a new layer for the **Door Cutouts**.

As with the previous step where a new layer was added for the Interior Walls, the same process must be followed to create a layer for the **Door Cutouts**.

First, open the [Layers Panel](#) by pressing on the **Info Button** in the [Top Toolbar](#) and then selecting the **Layers** option.



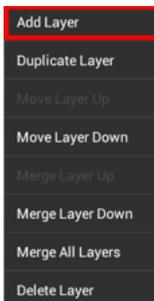
Second, lock the **Interior Walls** layer since no additional changes will need to be made.



TouchDraw for Android Floorplan Tutorial

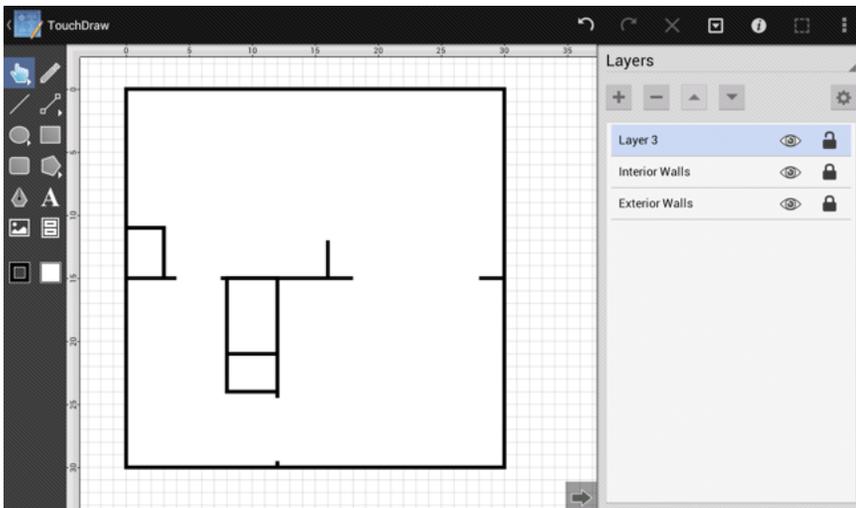


Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

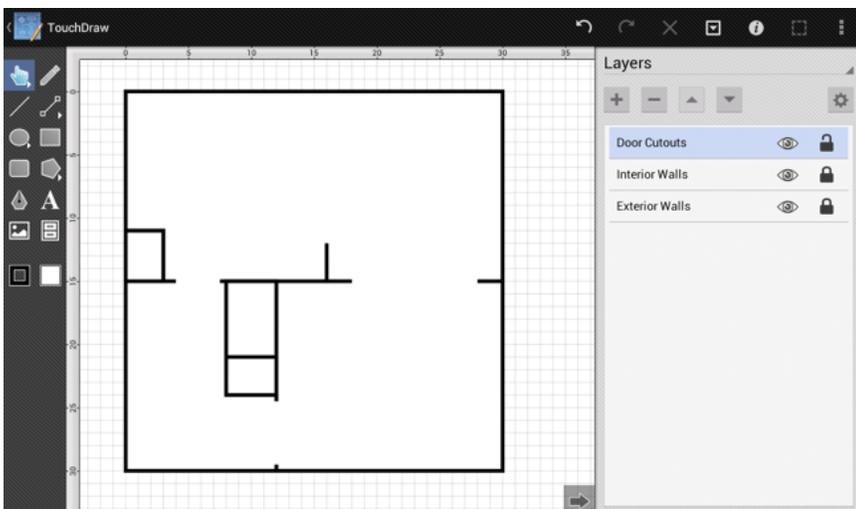


The **Layers Panel** will appear as shown below once the new layer has been added.

TouchDraw for Android Floorplan Tutorial

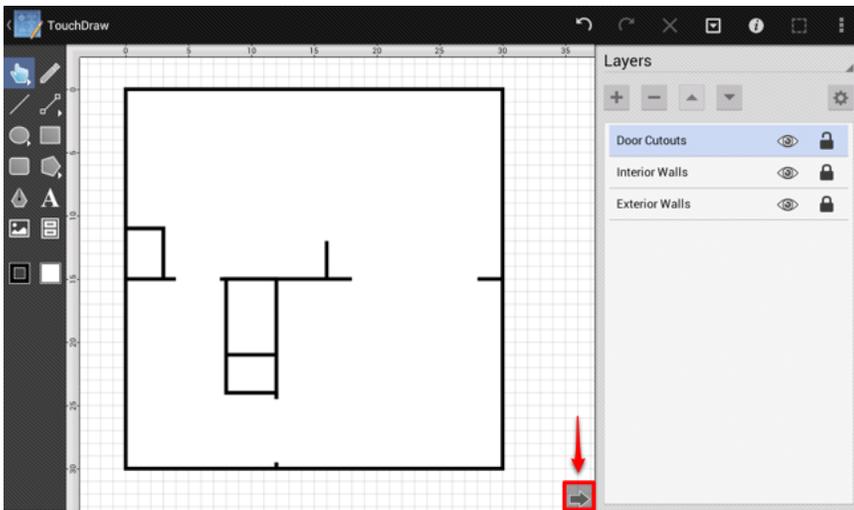


Fourth, as before, triple tap on the newly created layer (Layer 3) and rename it to **Door Cutouts**.



Lastly, make sure that the **Door Cutouts** layer is selected and then dismiss the **Layers Panel** by tapping on the **Hide Sidebar Button** located at the bottom of the [Sidebar](#).

TouchDraw for Android Floorplan Tutorial



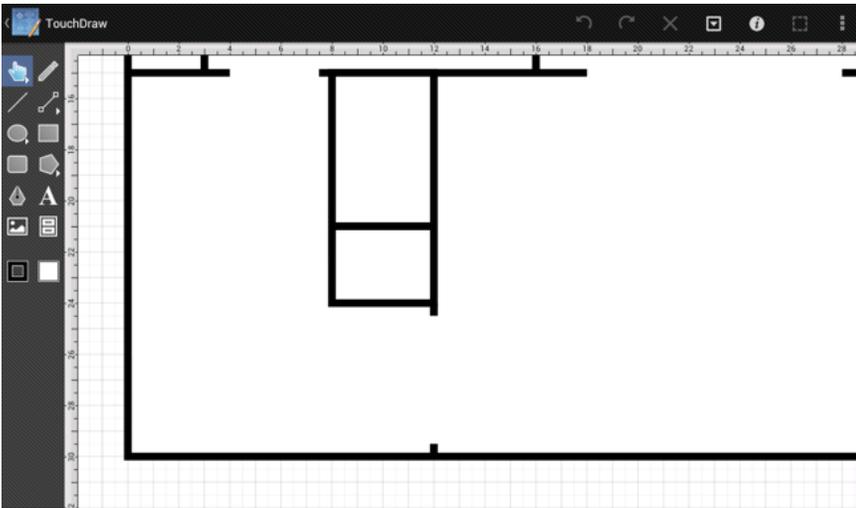
[Continue to Next Step](#)

12. Step 11 - Create Door Cutouts

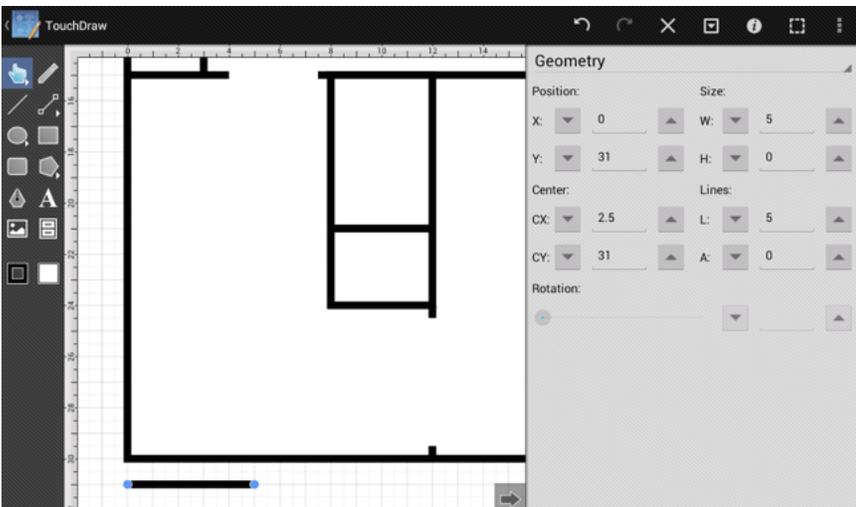
The next step is to create the cutouts where the doors will go. The cutouts are nothing more than white filled rectangles that cover the wall where the doors will be located and are added to make the walls invisible in that location.

We created the following diagram (also done as an additional layer within the TouchDraw drawing) in order to provide a guide as to where the cutouts should be placed:

TouchDraw for Android Floorplan Tutorial

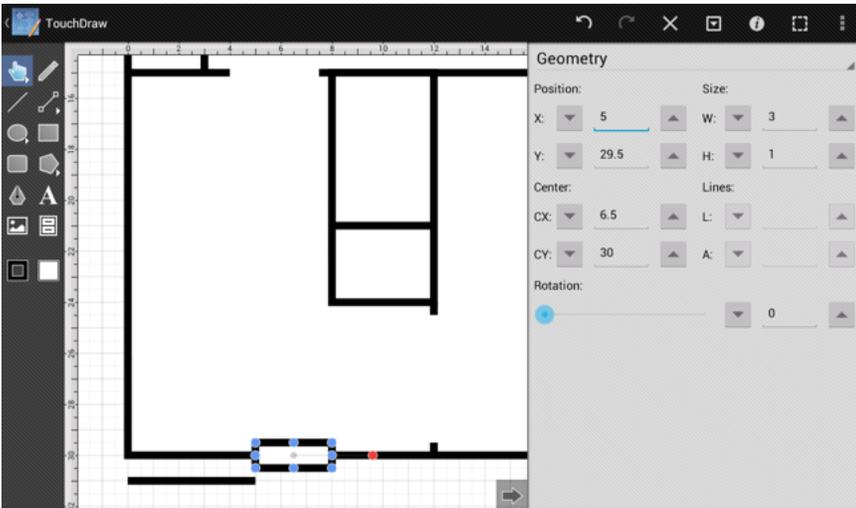


First, the front door is 5 feet from the left, so a temporary line must be drawn as a point of reference.



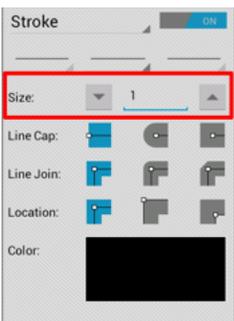
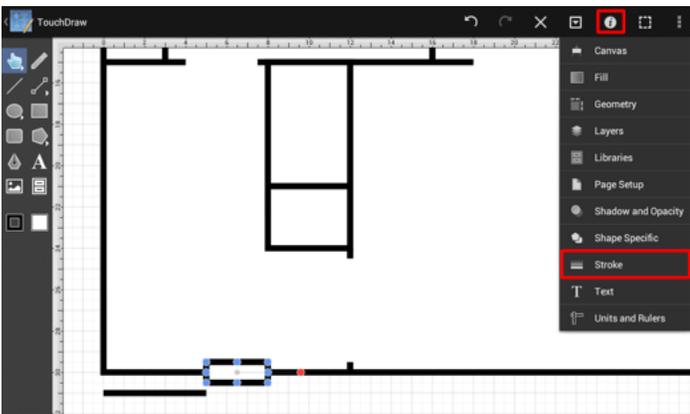
Next, use the [Rectangle Tool](#) to draw the cutout.

TouchDraw for Android Floorplan Tutorial



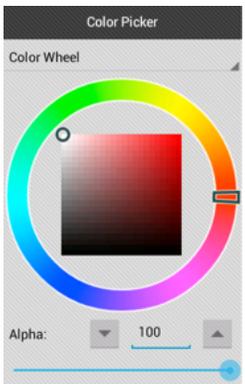
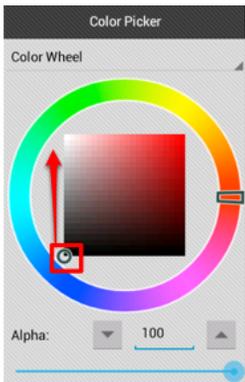
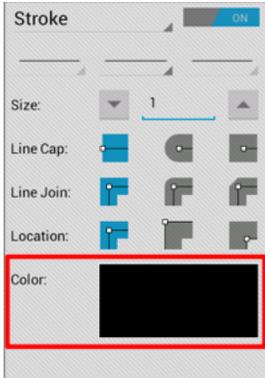
The rectangle was drawn with the current stroke setting (which was 6 points and black), so a few stroke attribute changes will be necessary before continuing.

First, bring up the [Info Menu](#), tap on the **Stroke** option, and change the the [Stroke Size](#) from 6 to 1.



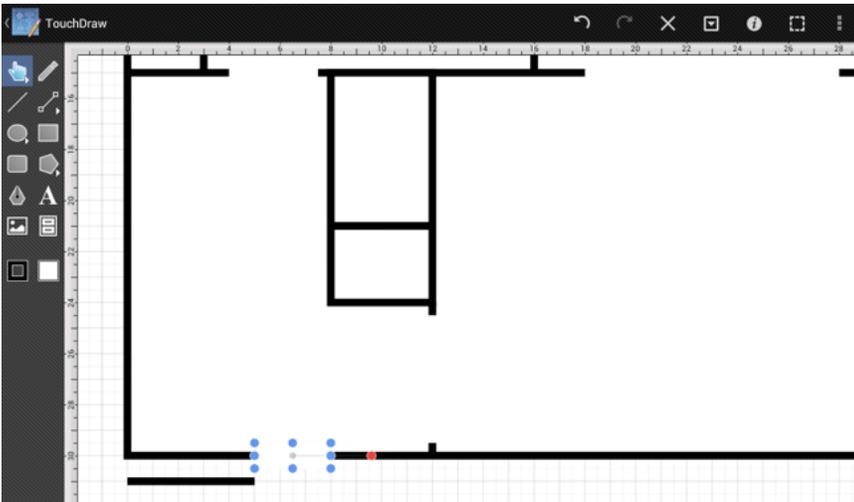
TouchDraw for Android Floorplan Tutorial

Next, change the **stroke color** to white by tapping on the **Color** attribute in the **Stroke Panel**. Once the **Color Picker** opens, grab the handle in the color square and then drag it to the upper left hand corner.

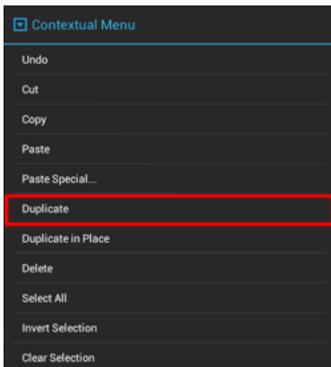


After dismissing the **Stroke Panel**, you will see that the cutout is now styled correctly (with a white stroke and a white fill).

TouchDraw for Android Floorplan Tutorial

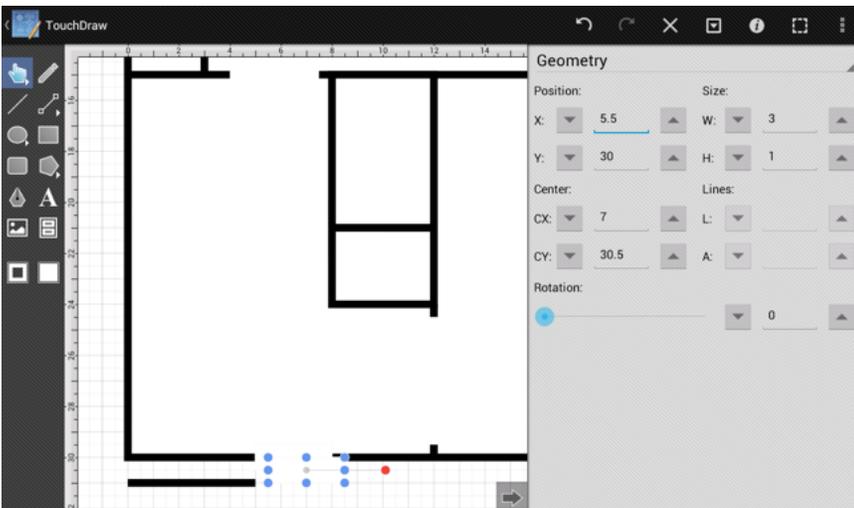


Next, [duplicate](#) the cutout and drag the copy to where the foyer closet door should go. To duplicate a shape, first make sure it is selected and then either touch and hold on the figure or press the **Contextual Menu Button** in the [Top Toolbar](#) to bring up the [Contextual Menu](#).

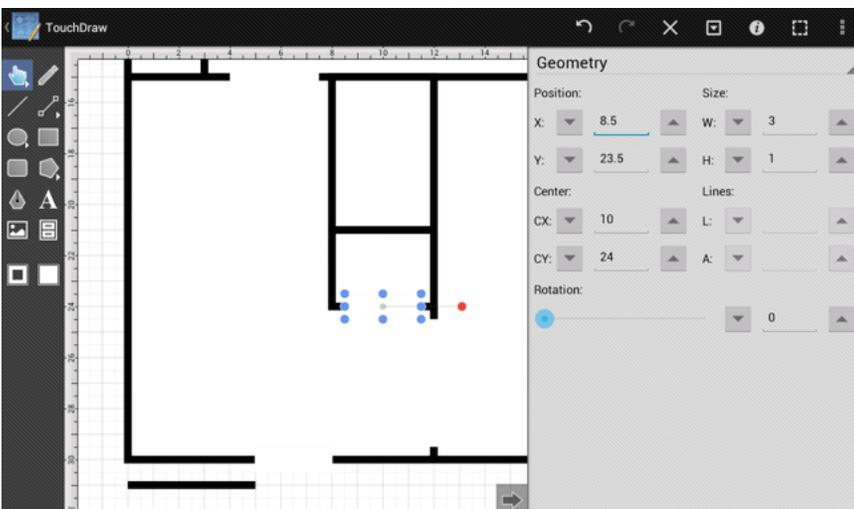


This action will create a duplicate that is slightly offset from the original.

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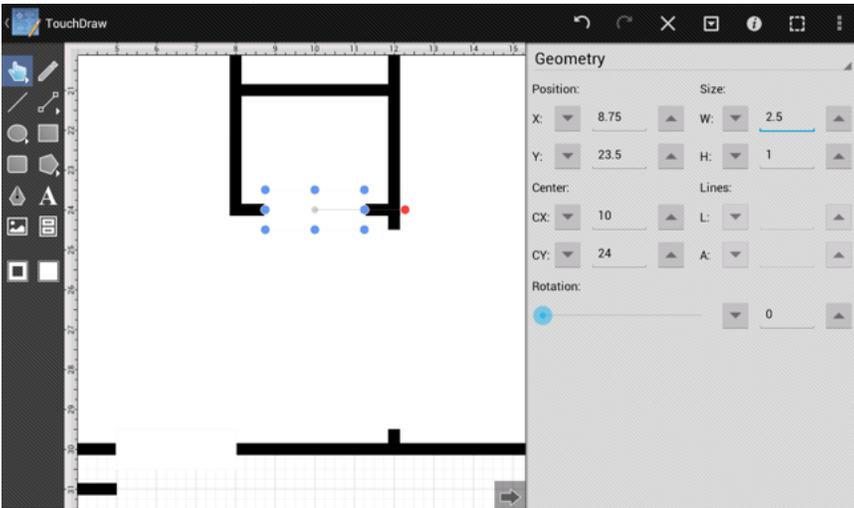
Then touch within the bounds of the copy and drag it to where the foyer closet door should go.



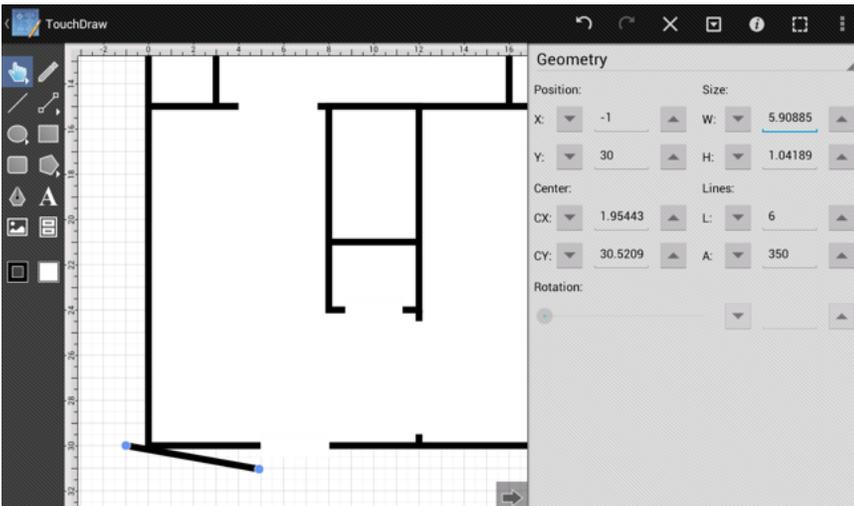
You will notice that the cutout has been centered within that wall; however, it will need to be made smaller as that door should be 2ft 6in. For this adjustment, the easiest thing to do is to grab the left center handle and move it over 3 inches, and then grab the right center handle and move it to the left 3 inches.

Note: At this zoom level there is a grid stop every 3 inches (1/4 of a foot), which makes the above adjustment easy. If we were to zoom in further, grid stops would appear every 1 inch.

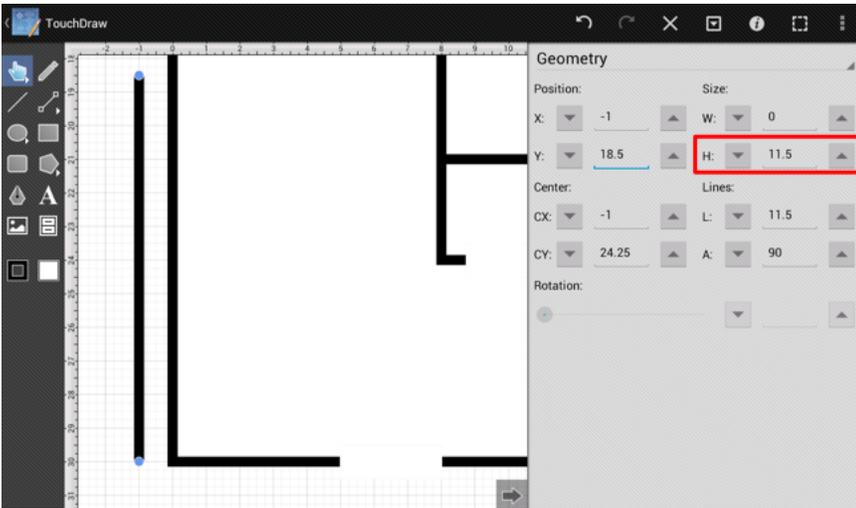
TouchDraw for Android Floorplan Tutorial



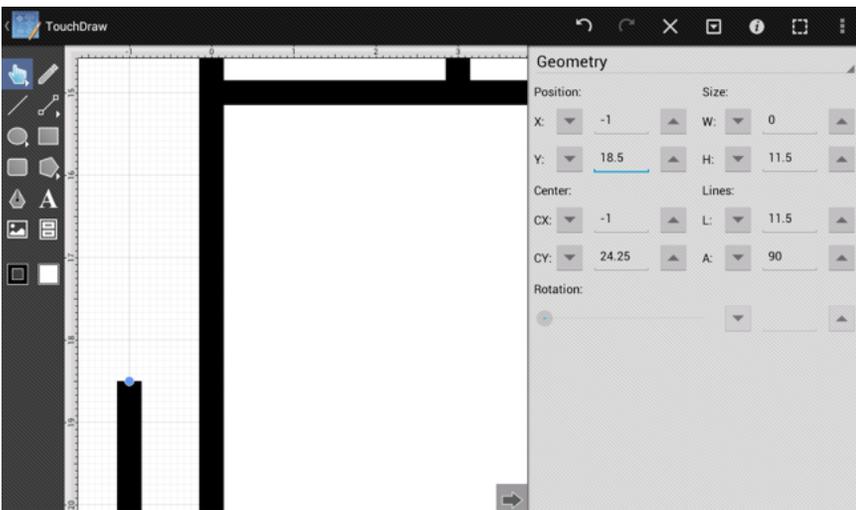
Next, move onto the side door. As seen in the example above, this door is 11 ft 7 in from the lower left hand corner. Since a temporary line already exists on the drawing, we will just drag the handles and re-use it for the side door as well.



TouchDraw for Android Floorplan Tutorial

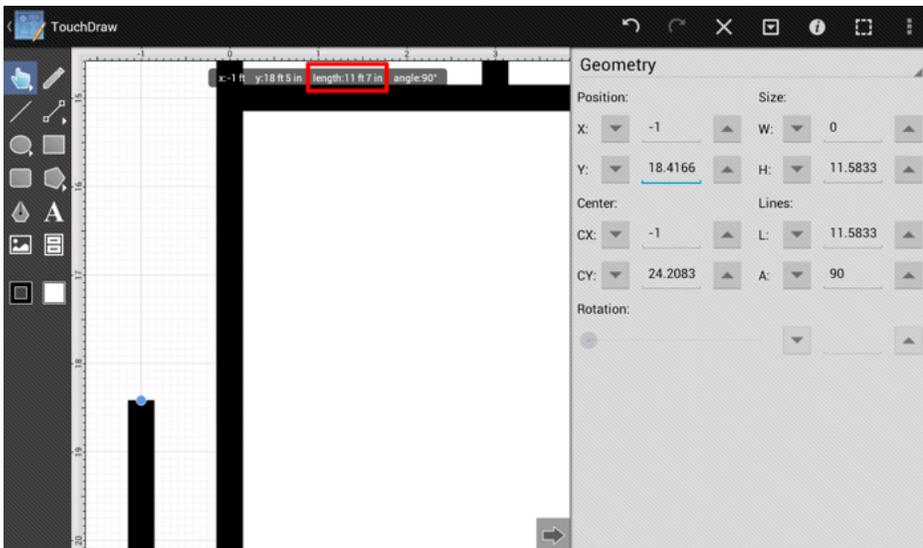


At the current zoom level, the line can be dragged up 11.5 ft (11 ft 6 in); however, we will need to zoom in more to extend that temporary line the final 1 inch.

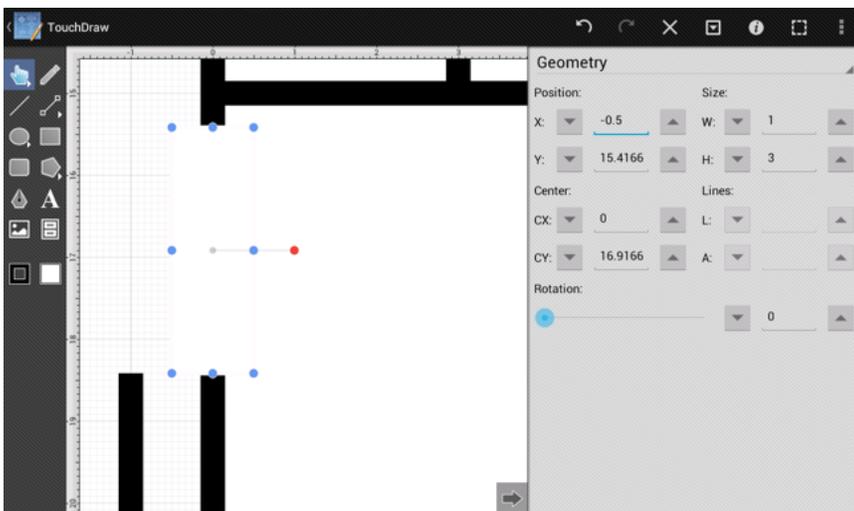


As the temporary line is dragged, you can look at the info bar that pops up to make sure it is dragged to the correct length.

TouchDraw for Android Floorplan Tutorial

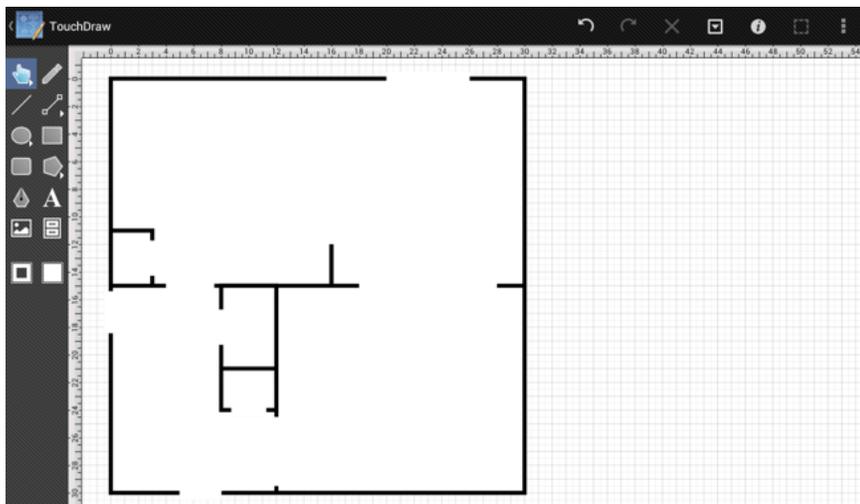


Next, create the cutout rectangle for this door using the [Rectangle Tool](#).



[Select](#) and [delete](#) the temporary reference line and create the cutouts for the rest of the doors by using the same process as above to generate the result shown below:

TouchDraw for Android Floorplan Tutorial



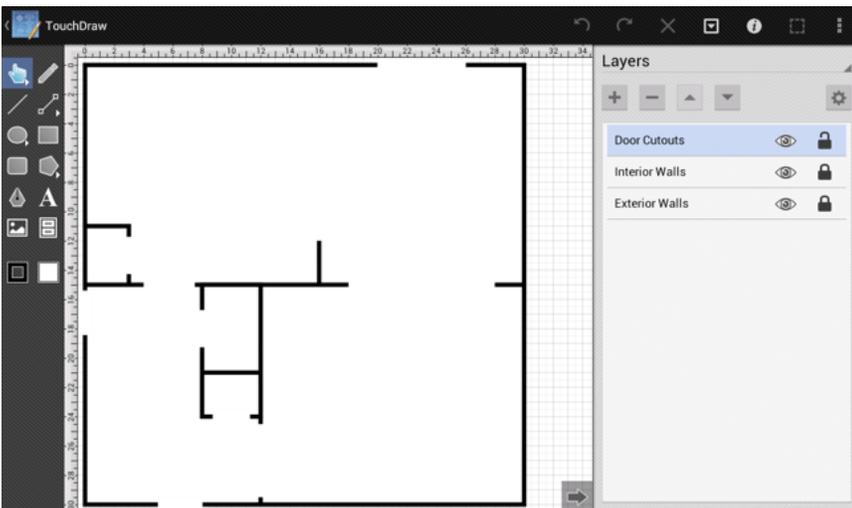
[Continue to Next Step](#)

13. Step 12 - Adding the Doors Layer

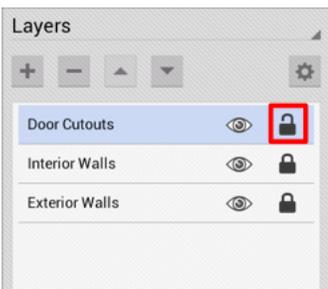
The next step in this process is to create a new layer for the **Doors**.

As with the previous step where a new layer was added, the same process must be followed to create a layer for the **Doors**.

First, open the [Layers Panel](#) by pressing on the **Info Button** in the [Top Toolbar](#) and selecting the **Layers** option from the [Info Menu](#).

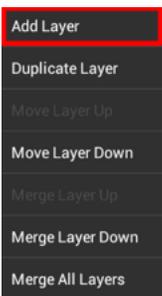


Second, [lock](#) the **Door Cutouts** layer since additional changes will not have to be made.



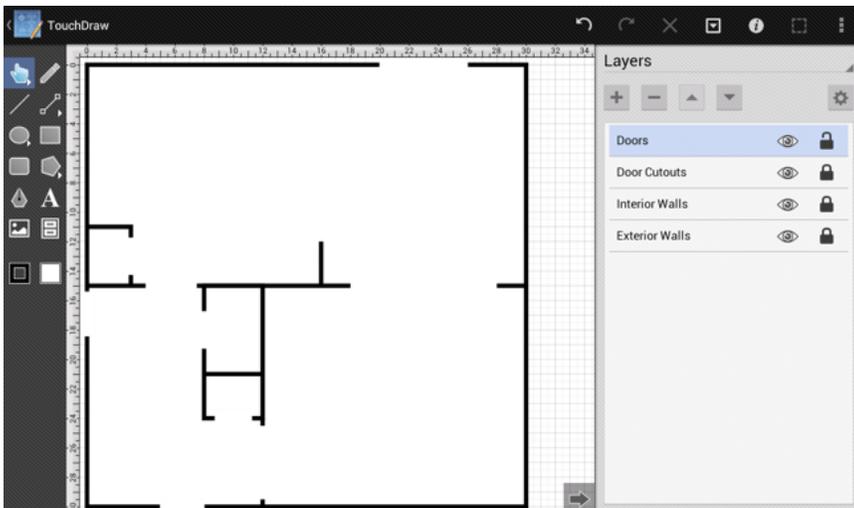


Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

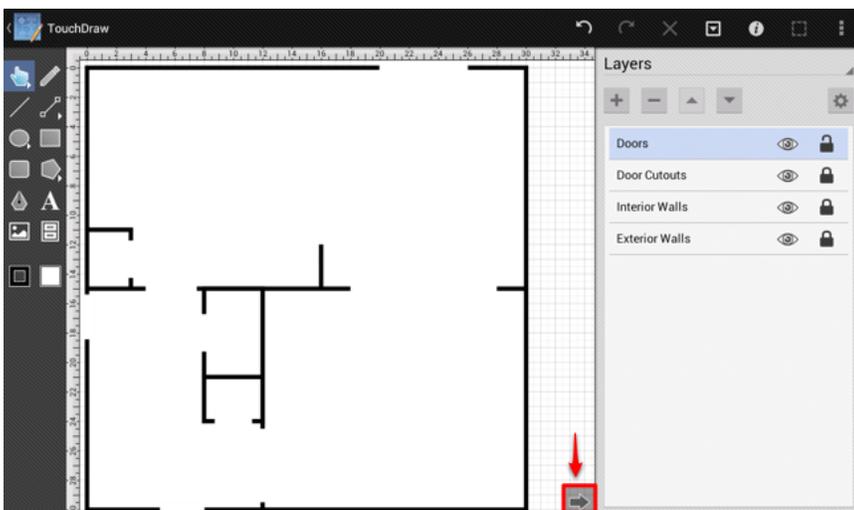


Fourth, as before, triple tap on the new layer (Layer 4) in the [Layers Panel](#) and rename it to **Doors**.

TouchDraw for Android Floorplan Tutorial



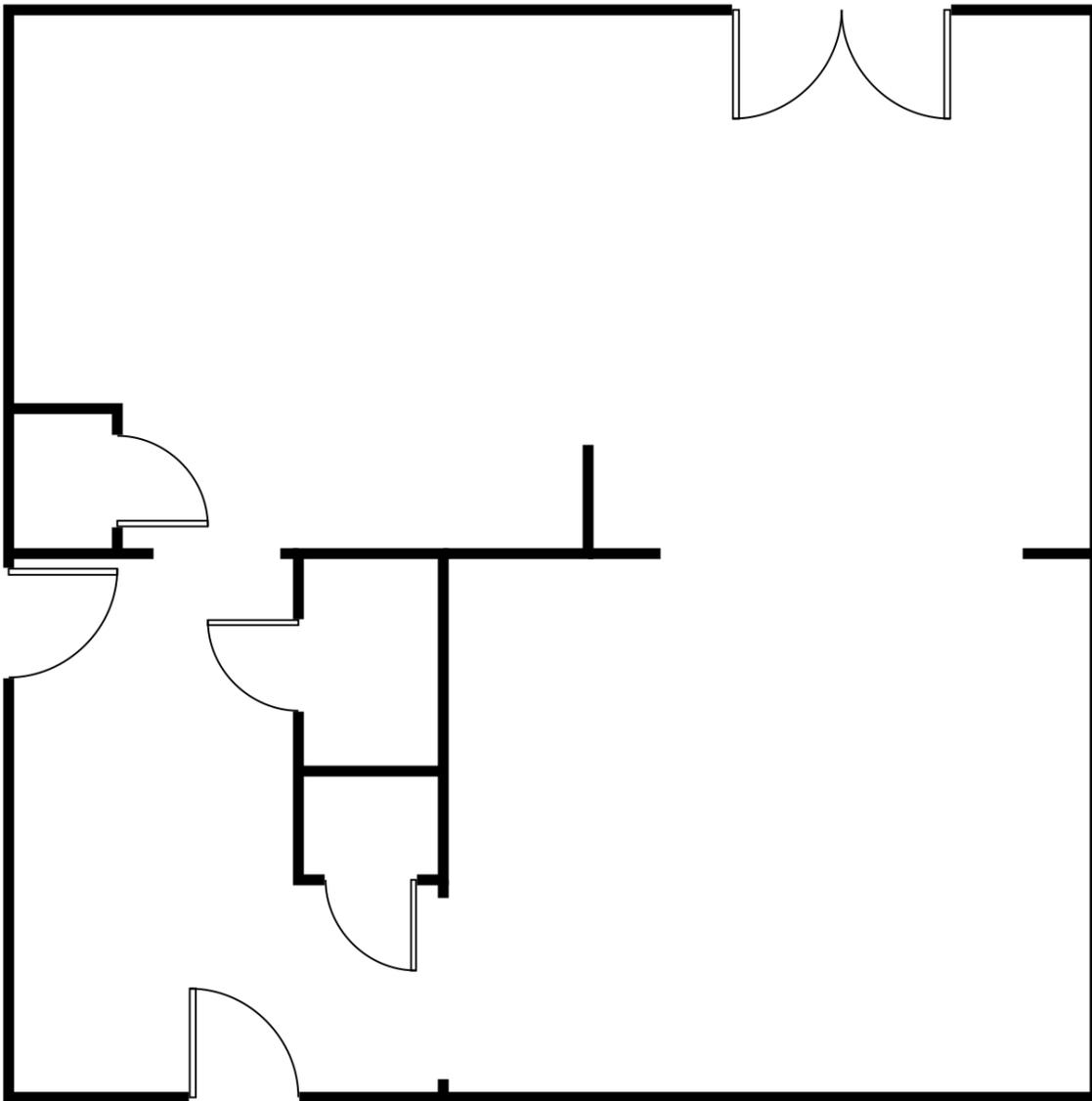
Lastly, make certain that the **Doors** layer is selected and then dismiss the **Layers Panel** by pressing on the **Hide Sidebar Button** at the bottom left corner of the panel.



[Continue to Next Step](#)

14. Step 13 - Adding the Doors

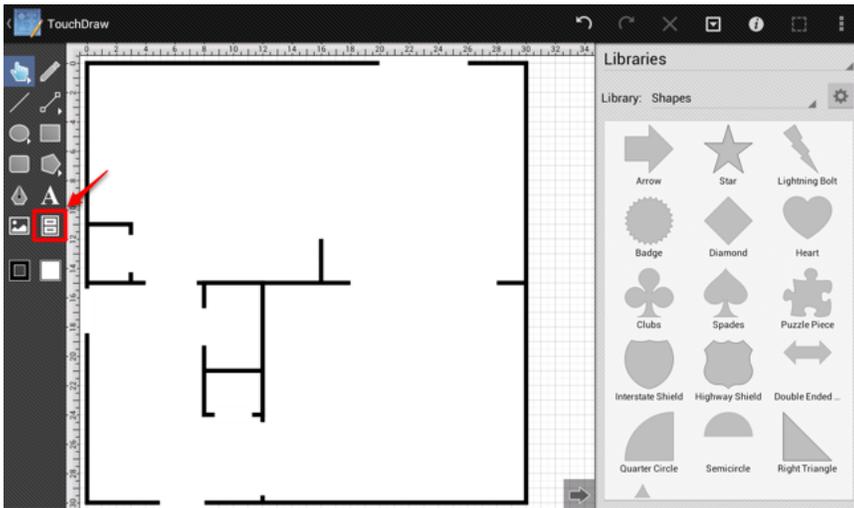
The next step in the process is to add the doors into the drawing. We have created the following drawing by hiding every layer except for the Exterior Walls, Interior Walls, Door Cutouts, and Doors to make it simple to understand which way the doors should swing.



First, open the [Libraries Panel](#) and navigate to the **Architectural** stencil sets. Press on the **Libraries Button**

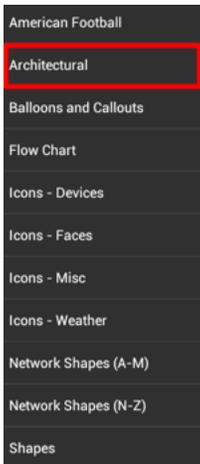
TouchDraw for Android Floorplan Tutorial

(looks like a file cabinet) in the [Drawing Toolbar](#) to access the libraries and stencils.

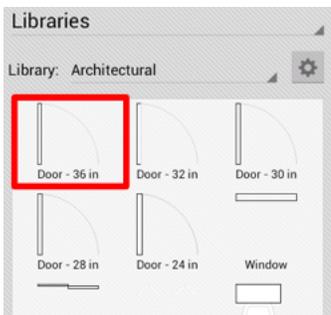


Next, tap on the [Library Selection Menu](#) and select the **Architectural** entry to view the architectural stencils.



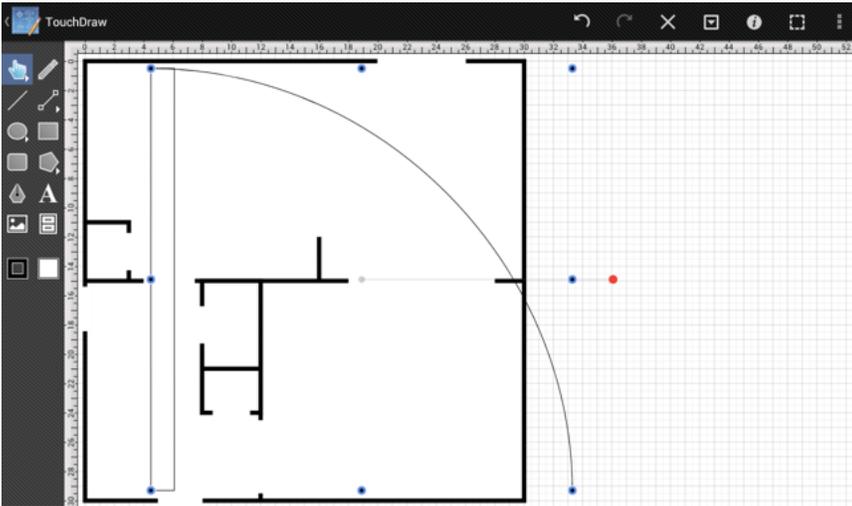


After opening the **Architectural** stencil library, the **Doors** will appear at the top of the list. The 36 inch door will be selected from the architectural list for this tutorial.



Touch on the 36 inch door and drag it to the center of the drawing. Press on the **Hide Sidebar Button** (right facing arrow) at the bottom left of the [Libraries Panel](#) when the door has been successfully dragged into the

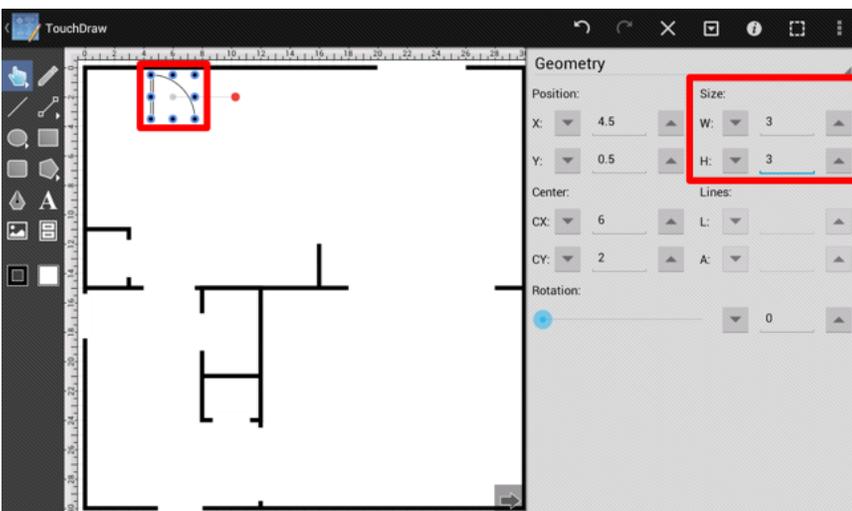
drawing.



The inserted door will be much bigger than the scale of the drawing that is being worked on. This is because the stencil was created at the "default" **Points per Unit** setting that was changed in the one of the earlier steps.

Note: The issue where the stencils aren't scaled to match the current **Points per Unit** will be in TouchDraw 2.0, if not sooner.

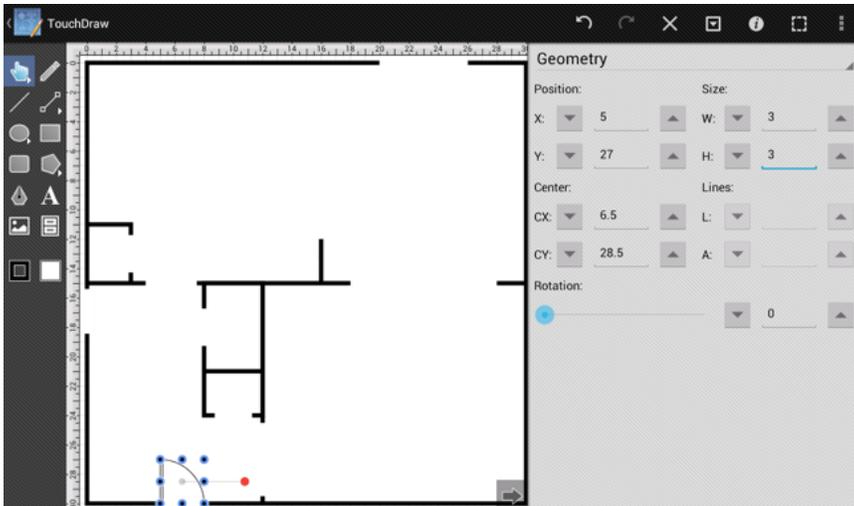
To resize the door, use the width and the height entries in the **Geometry Panel** of the sidebar. Enter a value of 3 for the width and the height since the front door should be 36" (or 3 ft).



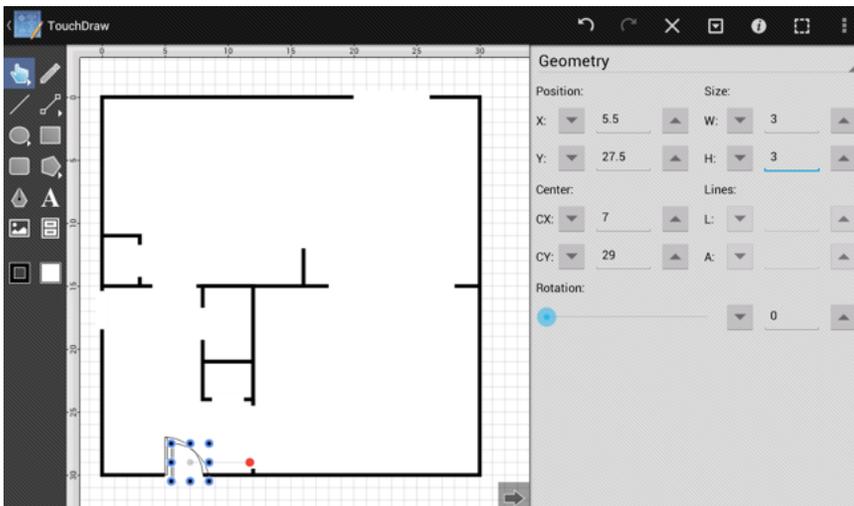
Now that the door is sized correctly, drag it down to the front door location for placement.

TouchDraw for Android Floorplan Tutorial

Note: It may be necessary to zoom in a little to position the door correctly within the door cutout. The [Geometry Panel](#) can also be used to set the doors X position to 5 and Y position to 27.



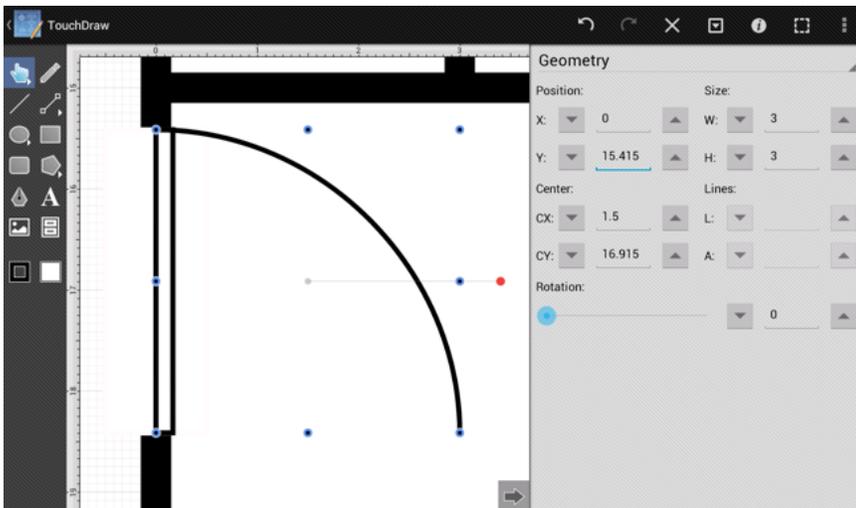
Next, [duplicate](#) the door by using the same technique performed earlier in this tutorial.



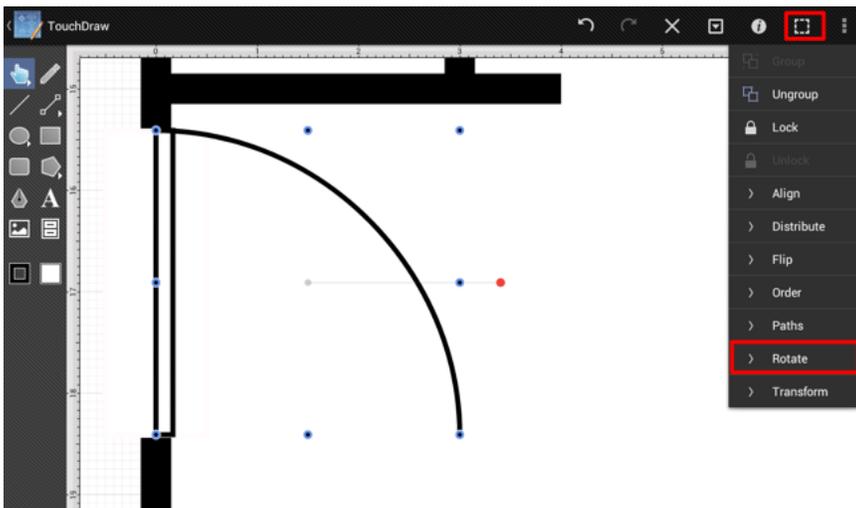
Then drag the door to where the side door should be placed.

Note: Since this door is 11 ft 7 in from from the lower right, you will need to zoom in until the 1 inch grid units are visible in order to place it correctly.

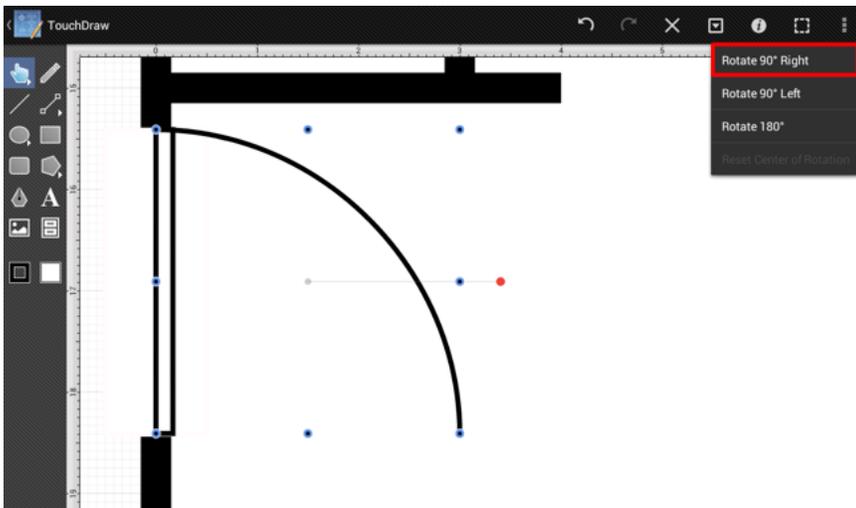
TouchDraw for Android Floorplan Tutorial



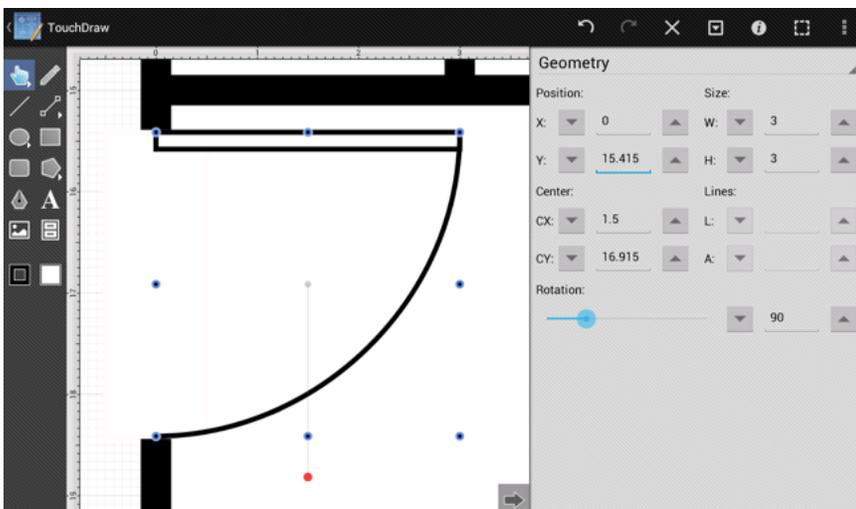
Next, use either the red **Rotation Handle** or the [Rotate 90 Degrees Right](#) command to rotate the door into it's final position. The **Rotate 90 Degrees Right** command is accessed by opening the [Selection Menu](#) and selecting the **Rotate** option.



TouchDraw for Android Floorplan Tutorial

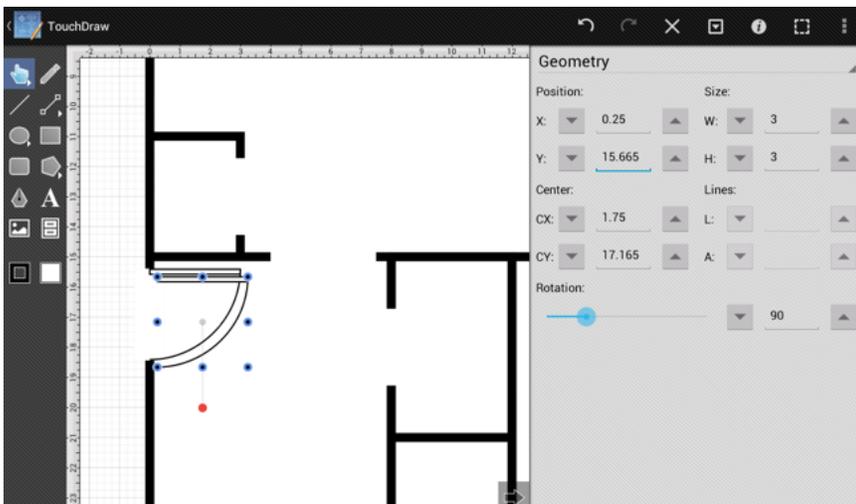


The side door will be in the correct location after executing the above command.

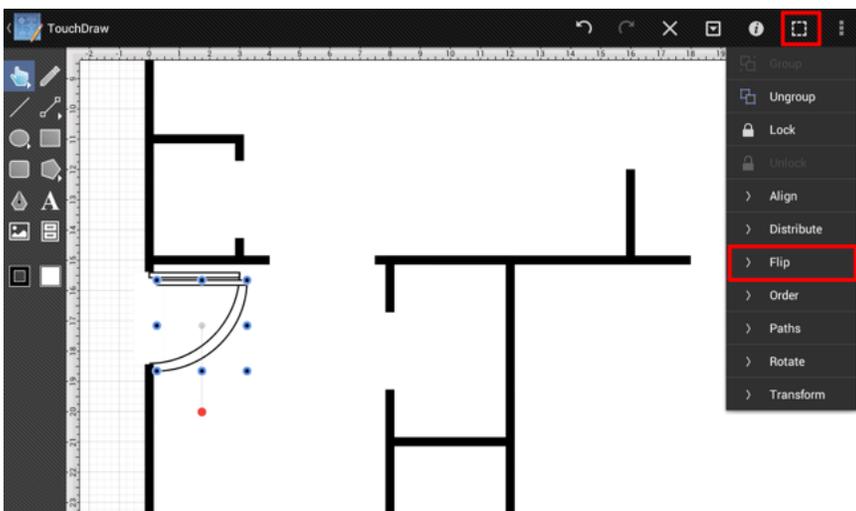


Next, [duplicate](#) this door to create a door for the bathroom.

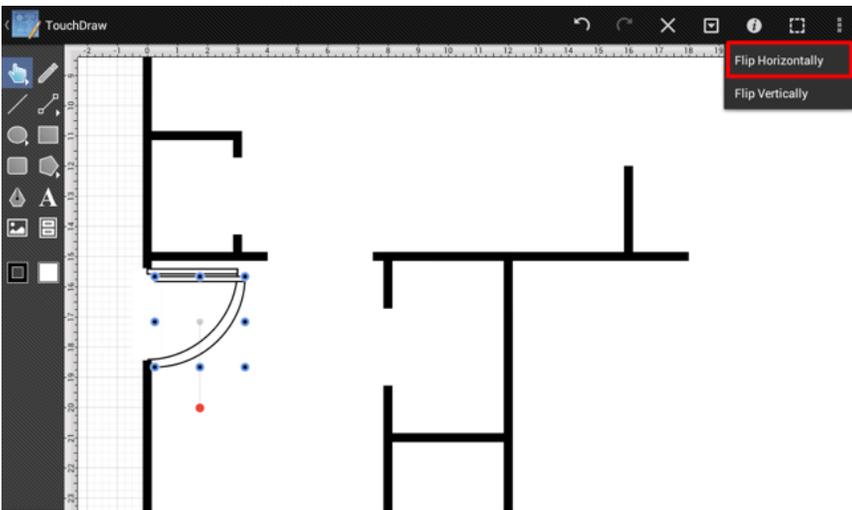
TouchDraw for Android Floorplan Tutorial



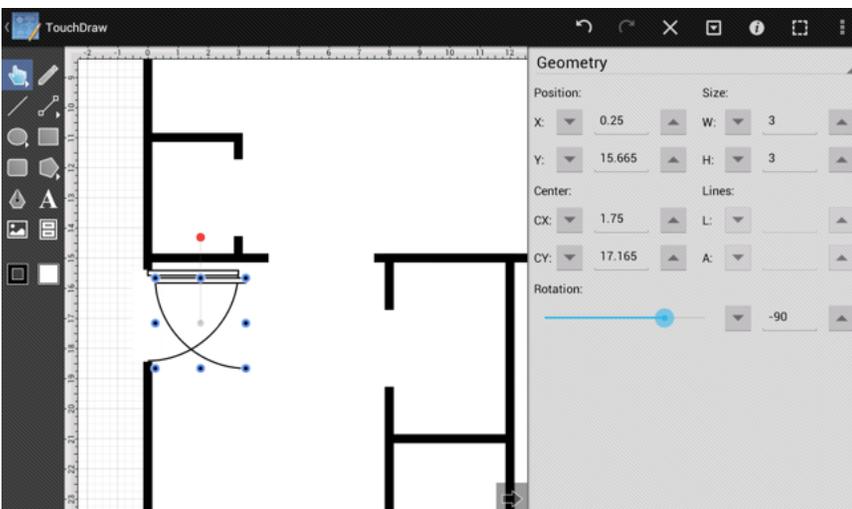
As you can see, the orientation for this door is wrong and it needs to be flipped horizontally. Open the [Selection Menu](#), select the [Flip Submenu](#) and tap on the **Flip Horizontally** option.



TouchDraw for Android Floorplan Tutorial

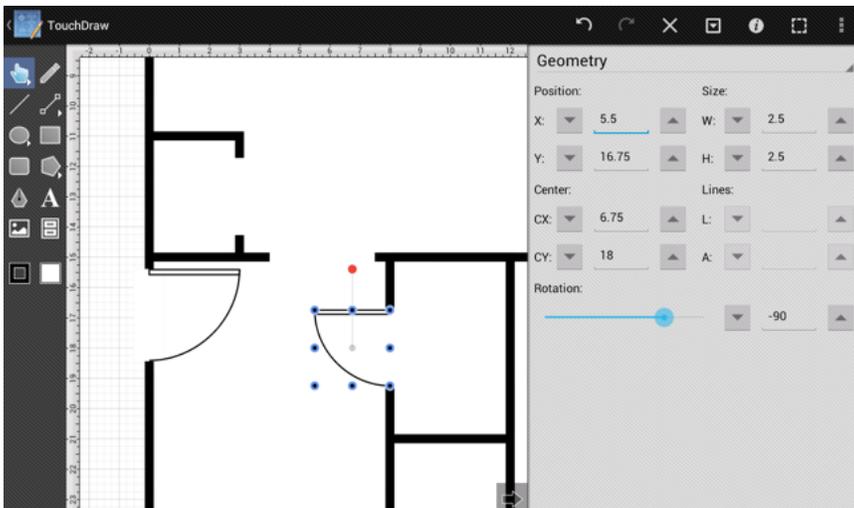


The bathroom door will have the correct orientation after executing the **Flip Horizontally** command.

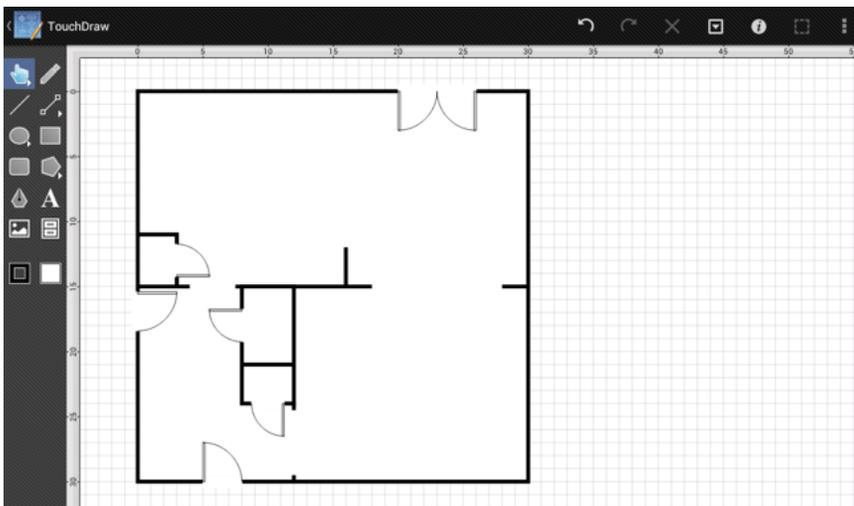


Next, the size of the door must be edited. The bathroom door is 2.5 ft (2 ft 6in) and the [Geometry Panel](#) can be used to edit the size of the door. Once the size has been adjusted, zoom in on the bathroom door and drag it to the appropriate location.

TouchDraw for Android Floorplan Tutorial



Use the same techniques as above ([Duplicate](#), [Geometry Panel](#), [Flip Horizontally](#), [Flip Vertically](#) and [Rotation](#)) to create the doors for the rest of the openings.



[Continue to Next Step](#)

15. Step 14 - Adding the Fireplace Layer

The next step is to create a new layer for the fireplace.

As done in previous steps for [adding new layers](#), we need to do the same process to create a layer for the **Fireplace**.

First, open the [Layers Panel](#).

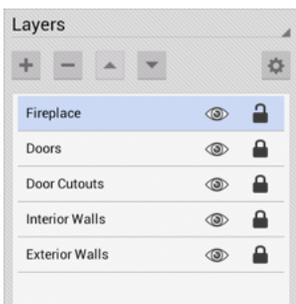
Second, [lock](#) the **Doors** layer since no additional changes will be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the new layer (Layer 5) and rename it to **Fireplace**.

Lastly, make certain the **Fireplace** layer is selected, then dismiss the **Layers Panel** by tapping on the **Hide Sidebar Button** located in the bottom left of the panel.

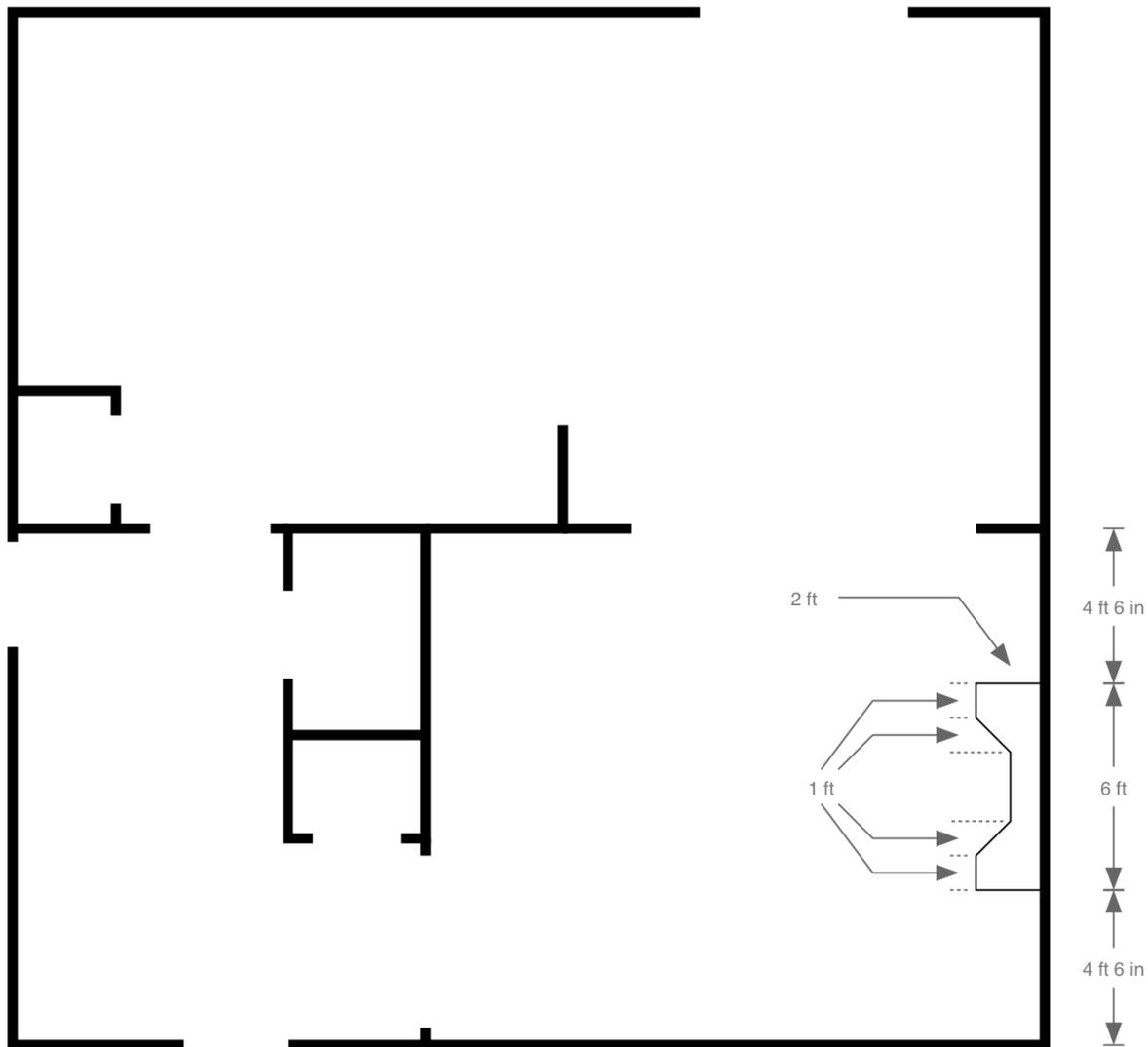
The **Layers Panel** should appear as shown below once the above changes have been made.



[Continue to Next Step](#)

16. Step 15 - Adding the Fireplace

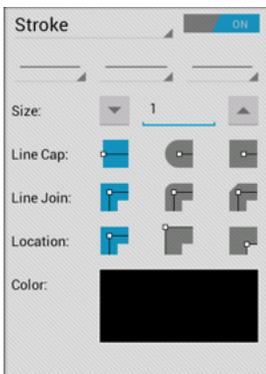
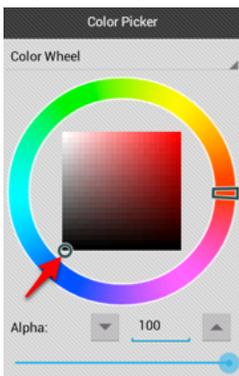
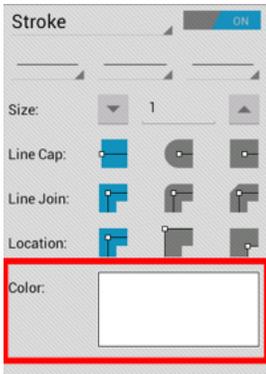
The next step in the process is adding the fireplace into drawing. We have created the following drawing to make it simple to understand the dimensions of the fireplace.



The [Path Tool](#) will be used to create the Fireplace in one step rather than using individual lines and the [Join Lines/Paths](#) command to create a compound path.

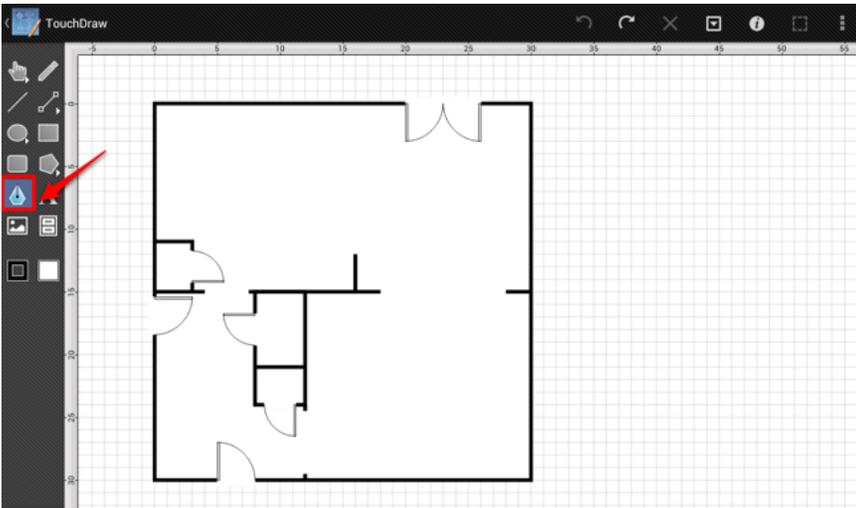
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First, the [Stroke Panel](#) must be opened to change the [Stroke Color](#) to **Black** since the last drawn shape (door cutouts) used a stroke color of white.

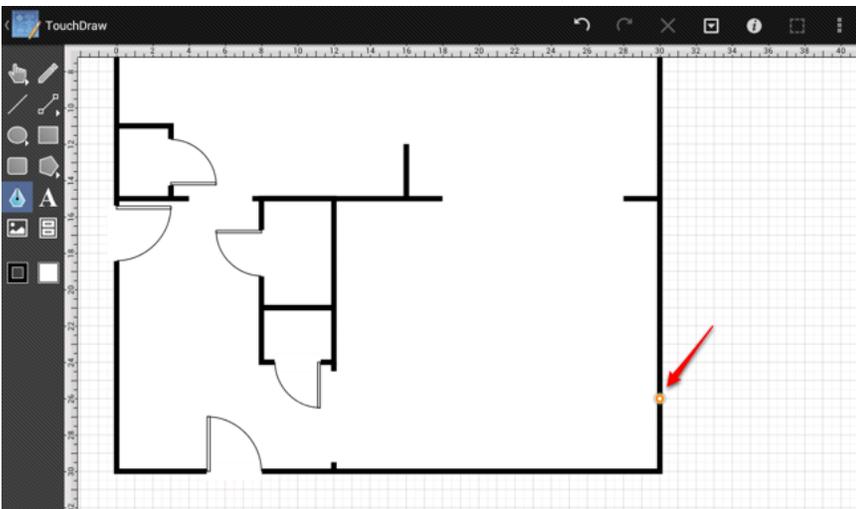


Second, select the **Path Tool** (resembles the tip of a Calligraphy Pen) in the [Drawing Toolbar](#).

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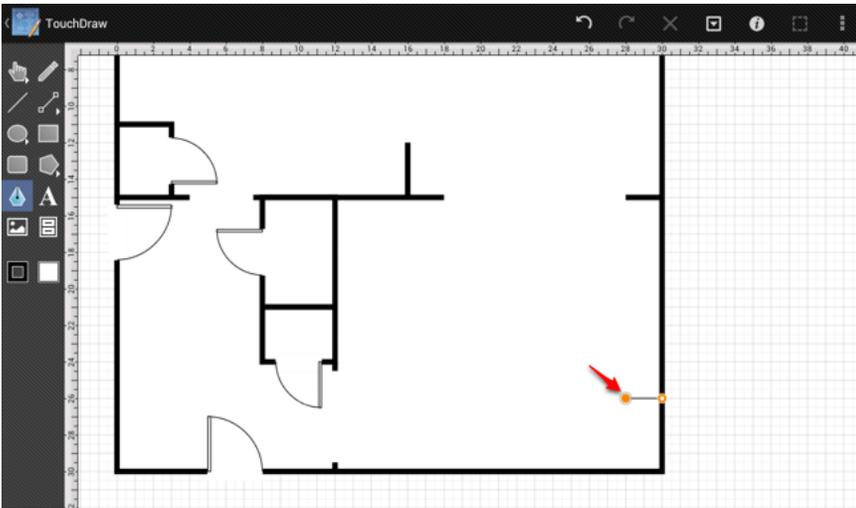


Third, tap on the drawing where the lower right hand corner of the fireplace will go.

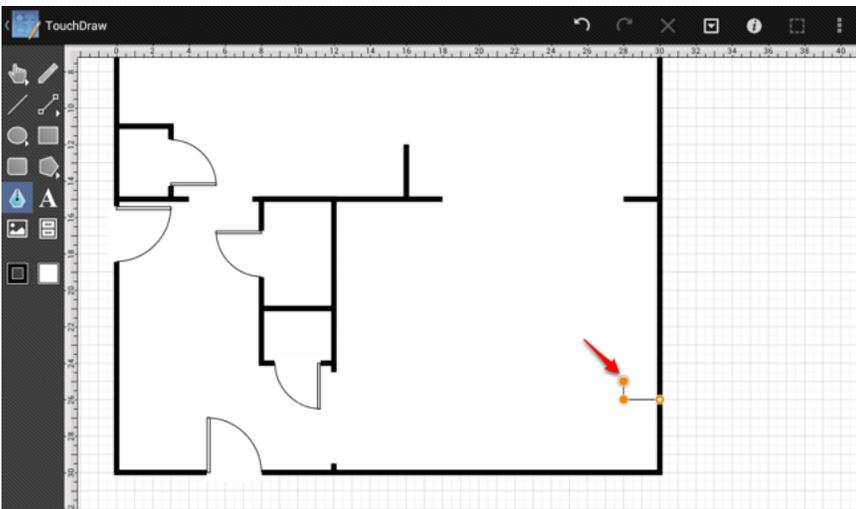


Next, move two feet to the left and tap on the drawing to insert the point for the lower left hand corner.

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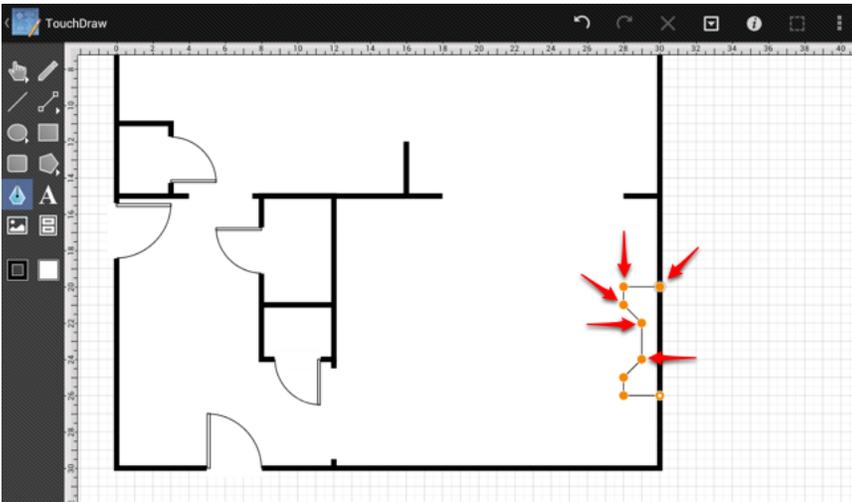


Next, move up 1 foot and add the next point.

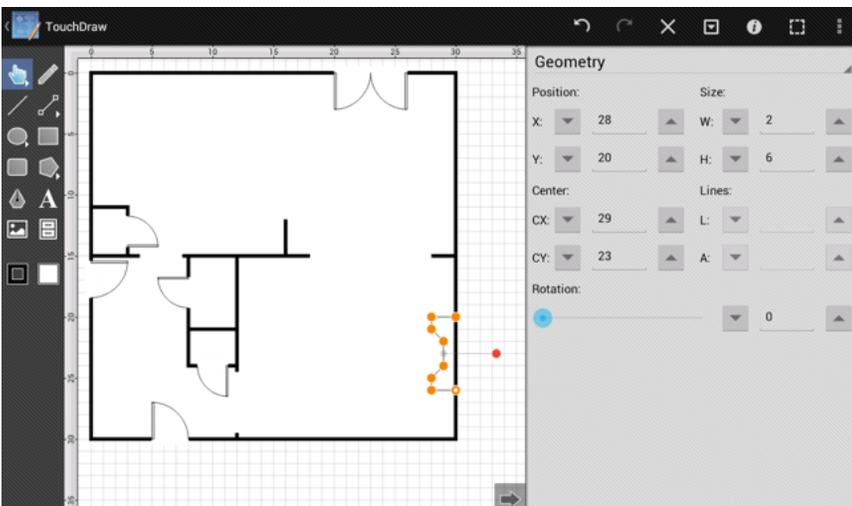


Add the next 5 points of the Fireplace by using the same process.

TouchDraw for Android Floorplan Tutorial

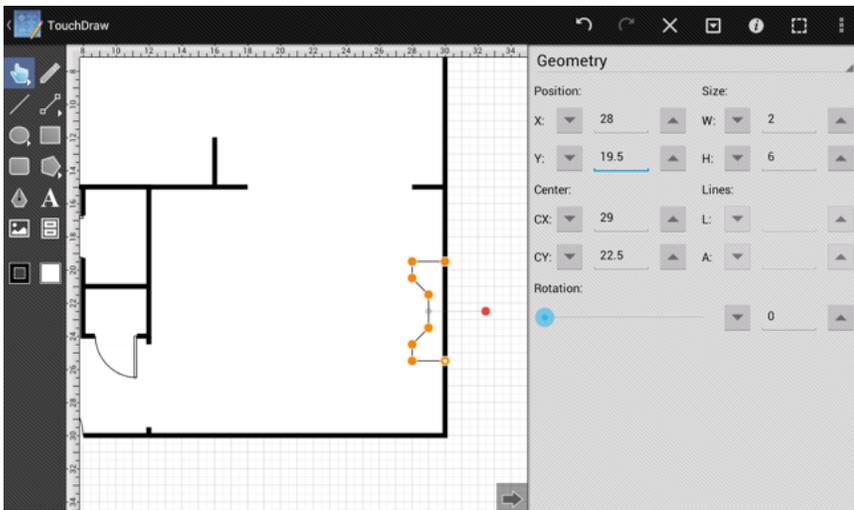


Next, tap on the starting point to close the path and finish the creation of the fireplace.



You might have noticed that the fireplace is not in the correct position. It should be 4ft 6in from the lower right hand corner; however, it is currently 4 ft from this corner in the drawing. This is quite easy to remedy in TouchDraw. Either [zoom in](#) and drag the shape up half a foot or use the [Geometry Panel](#) to change the shapes Y position from 20 to 19.5.

TouchDraw for Android Floorplan Tutorial



[Continue to Next Step](#)

17. Step 16 - Adding the Stairs Layer

The next step is to create a new layer for the stairs.

As with previous steps where new layers were added, the same process must be followed to create a layer for the **Stairs**.

First, open the [Layers Panel](#).

Second, **lock** the **Fireplace** layer since no additional changes have to be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the new layer (Layer 6) and rename it to **Stairs**.

Lastly, make certain the **Stairs** layer is selected, then dismiss the **Layers Panel** by tapping on the **Hide Sidebar Button** in the bottom lower left of the panel.

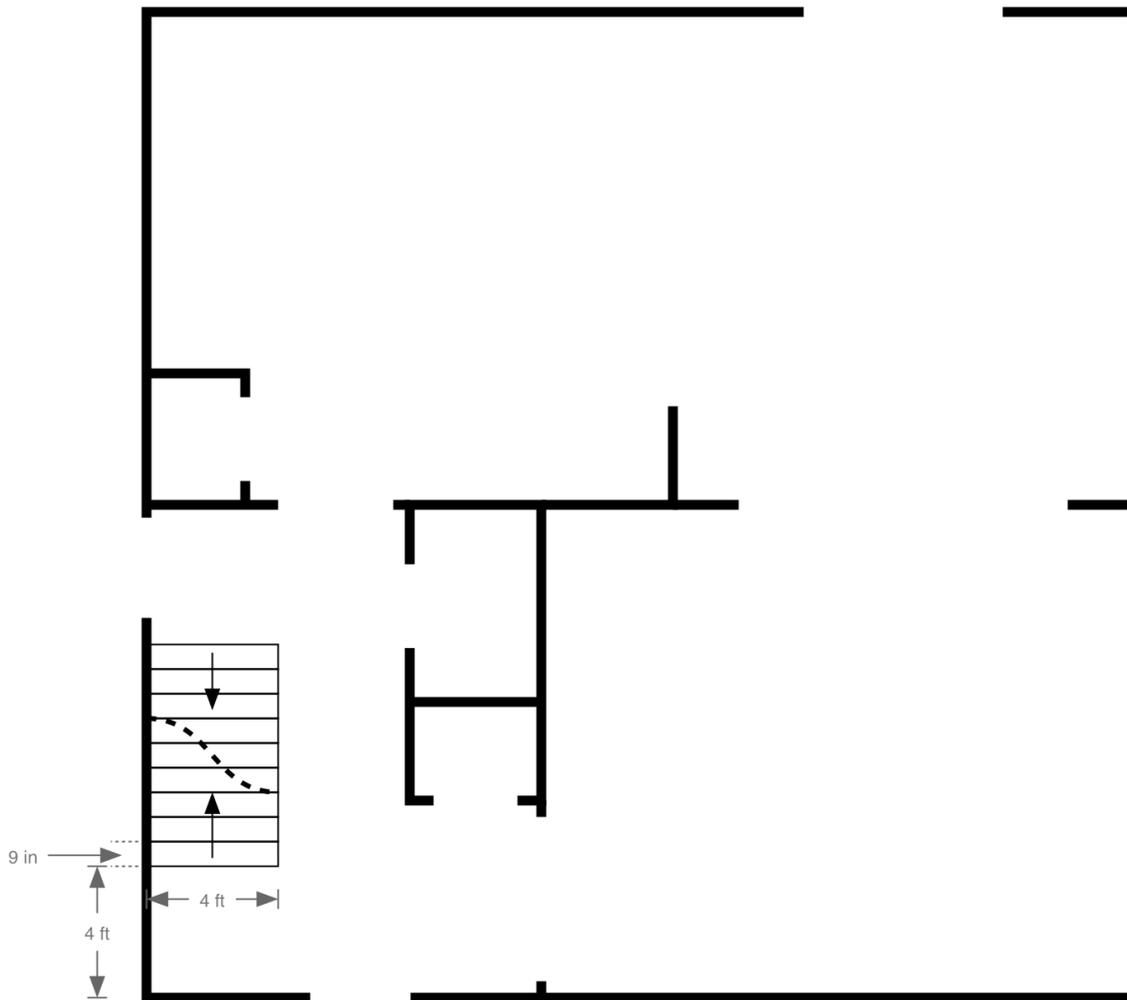
The **Layers Panel** will appear as shown below once the above steps have been completed.



[Continue to Next Step](#)

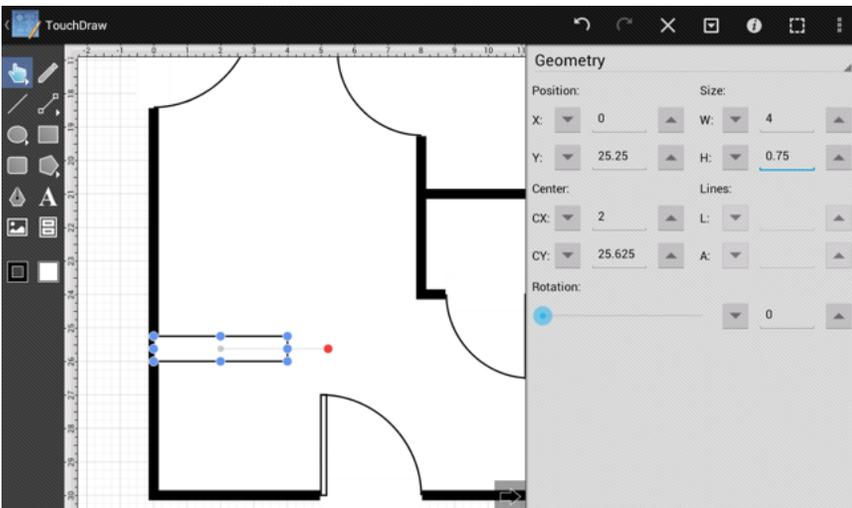
18. Step 17 - Adding the Stairs

The next step in this tutorial is to add the stairs. The following drawing has been provided as a point of reference for the dimensions and relative location of the stairs.

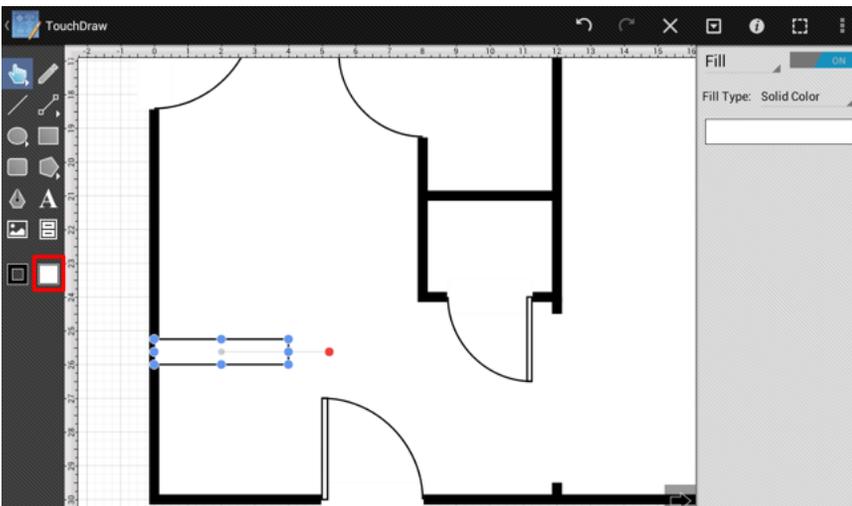


First, [zoom](#) in on the foyer area to make it easier to create the stairs. As seen in the diagram above, each stair tread is 4 ft wide by 9 in deep. Use the [Rectangle Tool](#) to draw the first stair (closest to the front door).

TouchDraw for Android Floorplan Tutorial



If you look closely, you will notice that the stairs overlap the exterior walls slightly. Use the [Fill Panel](#) in the [Sidebar](#) to turn off the fill for this shape and make it visually cleaner. The **Fill Panel** can be accessed by pressing on the button located directly below (portrait mode) or to the right (landscape mode) of the **Stroke Button** in the [Drawing Toolbar](#).

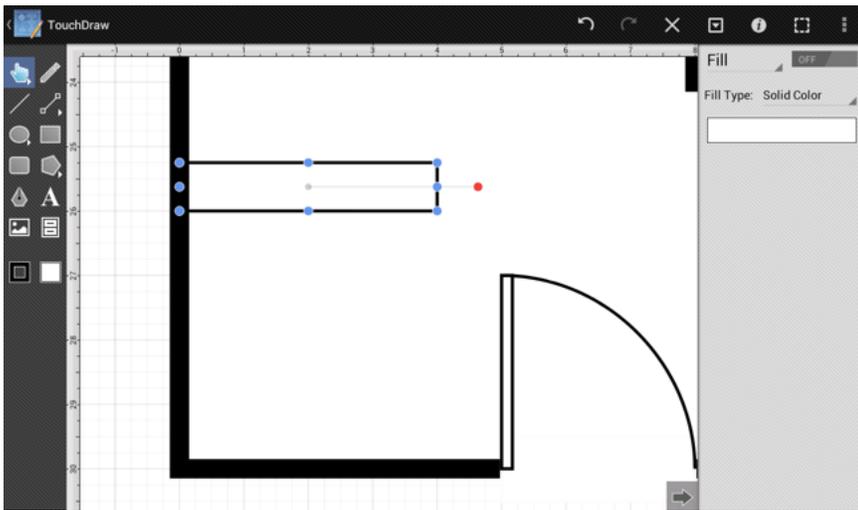


An **On/Off** toggle button can be found in the titlebar of the **Fill Panel**.

TouchDraw for Android Floorplan Tutorial



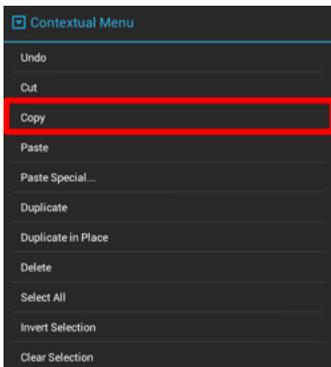
Toggle the button to **OFF** to cause the drawn rectangle to no longer have a [fill color](#).



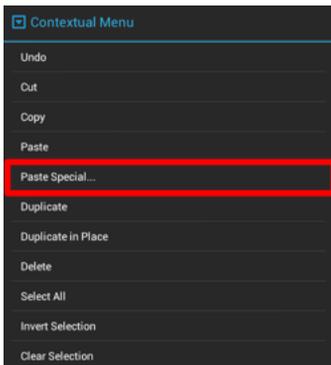
Next, the rest of the stairs need to be drawn. One way would be to simply use the [Rectangle Tool](#) to draw the remaining 8 stairs; however, this can be accomplished in a quicker manner within TouchDraw by using the [Paste Multiple Copies...](#) command.

First, [copy](#) the rectangle to the clipboard. As with the [Duplicate](#) command, this is done by touching and holding on the shape to bring up the [contextual menu](#) or pressing on the **Contextual Menu Button** in the [Top Toolbar](#). The first stair must be selected for the copy option to appear in the contextual menu.

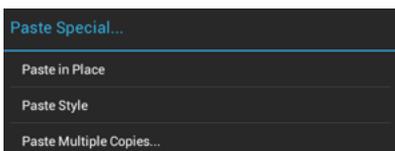




Next, open the [contextual menu](#) and navigate to the [Paste Special... Submenu](#). This is accomplished by using the same steps as above to open the contextual menu and then selecting the **Paste Special... Submenu**.



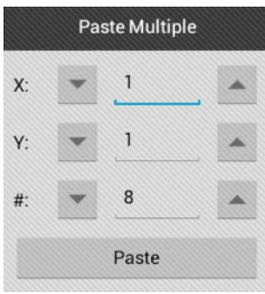
Pressing on the **Paste Special... Submenu** allows for more **Paste** options to be seen.



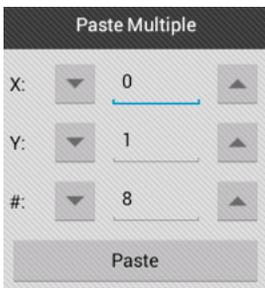
The option that we are interested in now is the **Paste Multiple Copies...** option. Tap on it next to see the following options.



The **Paste Multiple Copies...** option allows for a specified number of copies of the shape (or shapes) currently copied to the clipboard to be pasted at specified increments. A total of 8 more steps will need to be inserted in order to create the stairs. The **# of Copies** entry must be changed to 8.



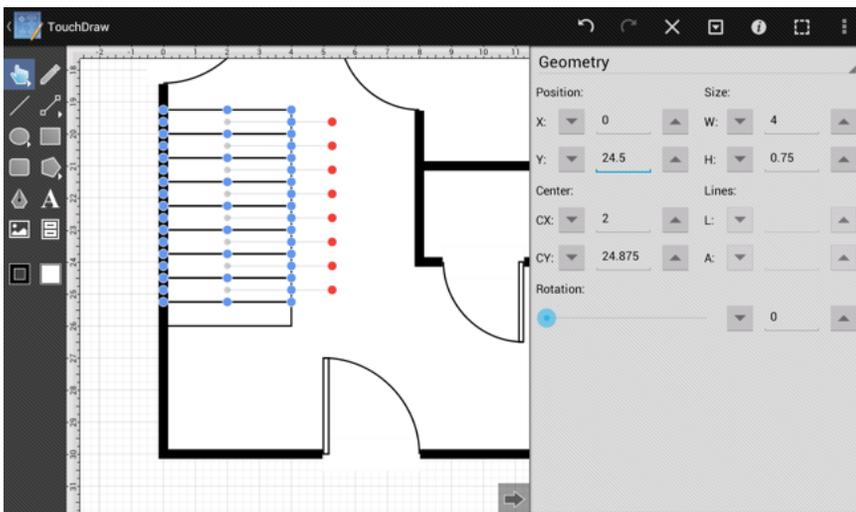
Next, change the **X Offset** field to 0 since the copies will only need to change position vertically from the position of the original shape.



Next, enter $-.75$ ($3/4$ of a ft = 9 in) for the **Y Offset** since the steps are 9 inches high and they must be copied upward (in the negative Y axis direction).

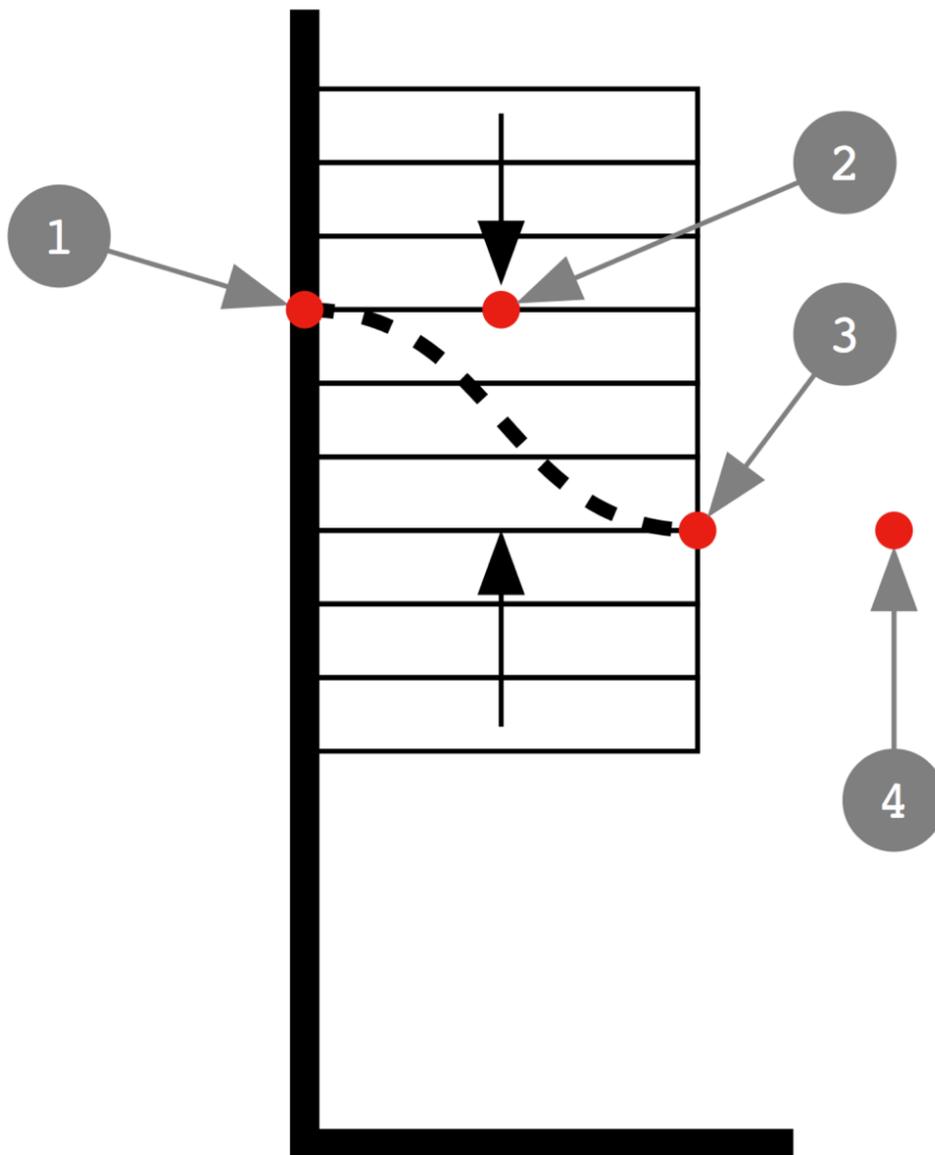


Press on the **Paste Button** to insert the copies.



The next step is to insert the curve which delineates that there are stairs going both up and down in this location and the [Path Tool](#) must be used to do this.

Since this is a slightly more complex operation, the steps will first be explained and then a video will be provided to show how to do this instead of having screenshots illustrating each step. Here is a diagram showing the points that will be discussed in the explanation:



Here is the explanation on how to create the curve.

1 Select the [Path Tool](#).

2 Tap at Point 1 and then drag your finger over to Point 2 before picking your finger up.

3 Tap at Point 3 and then drag your finger over to Point 4 before picking your finger up.

4 Tap on the [Move, Zoom, and Selection Tool](#) to end the path creation process.

5 Select the curve that was just created.

6 Open the [Stroke Panel](#).

TouchDraw for Android Floorplan Tutorial

7 Change the **Stroke Size** to 2

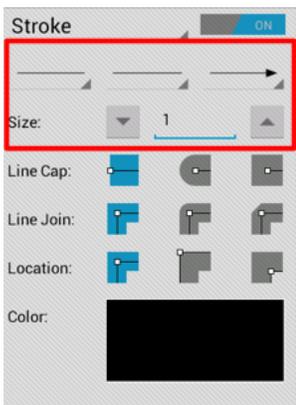
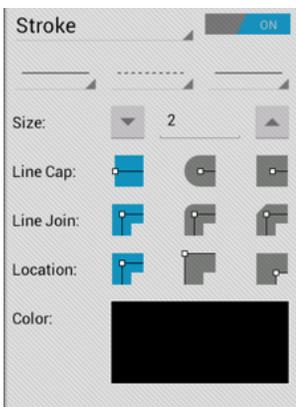
8 Select the dotted line as the line style.

Here is a video demonstrating how to do the above steps.

Next, the arrows showing the direction for going up and down the stairs need to be added. The **Line Tool** can be used to do this; however, the **line style** will need to be changed before doing so because the stroke size is currently set to 2 and the line is set to a dash pattern.

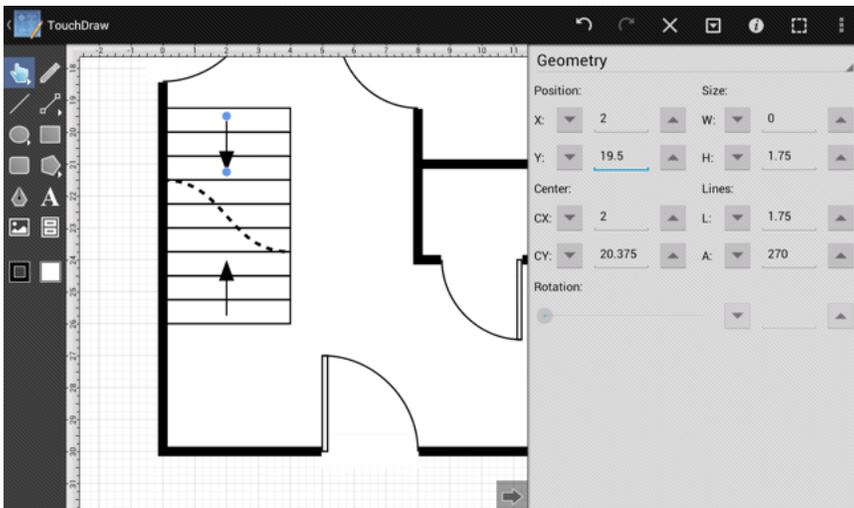
Note: Make certain the curve is de-selected before changing the stroke settings, otherwise the stroke style of the curve will be changed.

Change the **stroke size** to 1, change the dash pattern back to solid, and set the end decoration of the line to an arrow within the **Stroke Panel**.



The lines can be drawn once the above stroke settings have been changed.

TouchDraw for Android Floorplan Tutorial



[Continue to Next Step](#)

19. Step 18 - Adding the Bathroom Layer

The next step is to create a new layer for adding the bathroom fixtures.

As with previous steps where new layers were added, the same process must be followed to create a layer for the **Bathroom Fixtures**.

First, open the [Layers Panel](#).

Second, [lock](#) the **Stairs** layer since no additional changes will be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the newly created layer (Layer 7) and rename it to **Bathroom Fixtures**.

Lastly, make certain the **Bathroom Fixtures** layer is selected and then dismiss the **Layers Panel** by pressing on the **Hide Sidebar Button** in the bottom left of the panel.

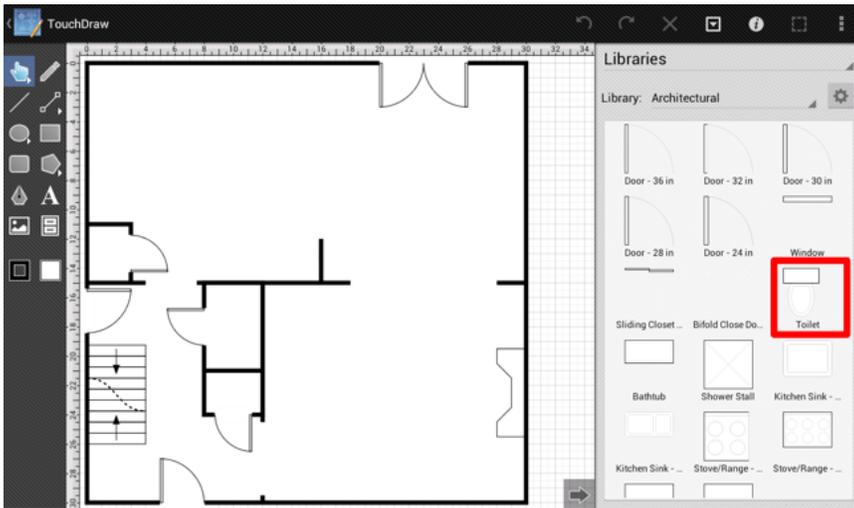
The **Layers Panel** will appear as shown below once these steps have been completed.



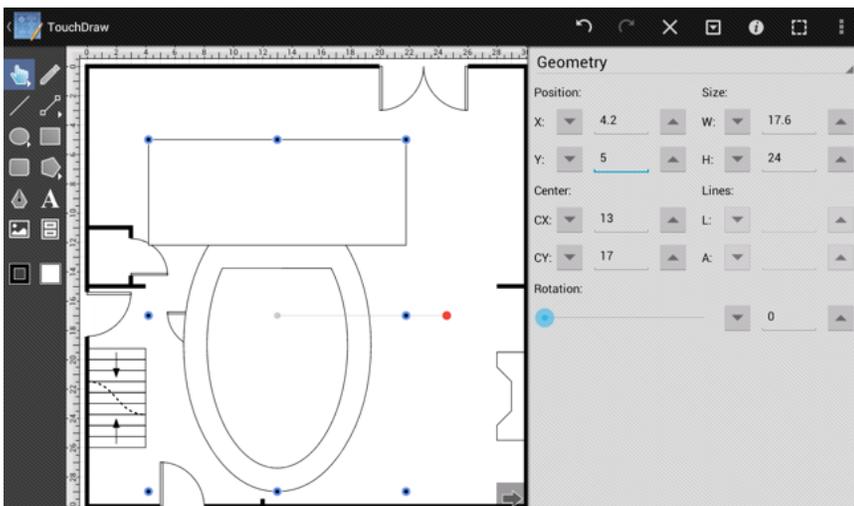
[Continue to Next Step](#)

20. Step 19 - Adding the Bathroom Fixtures

Adding a toilet to the floor plan is similar to the process of inserting doors into a drawing. This is accomplished by selecting a toilet from the **Architectural** stencil library in the **Libraries Panel** and **inserting** it into the drawing.



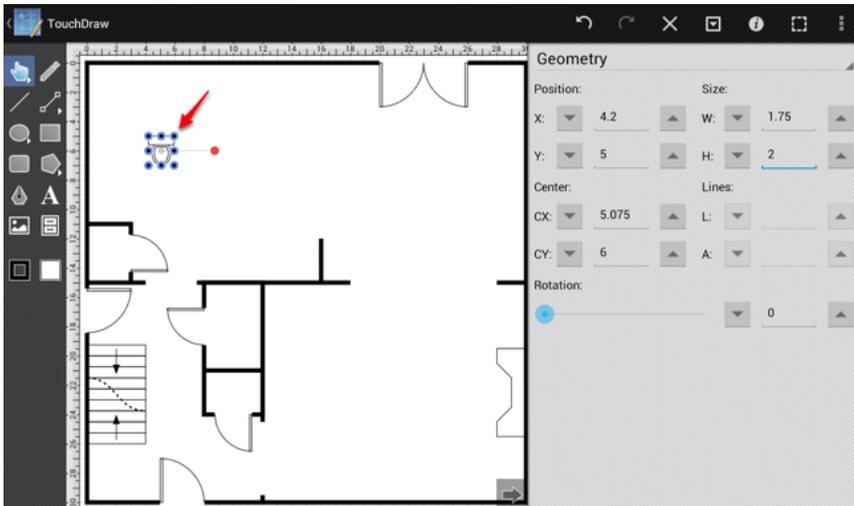
The following screenshot shows how the drawing will appear after the toilet has been inserted.



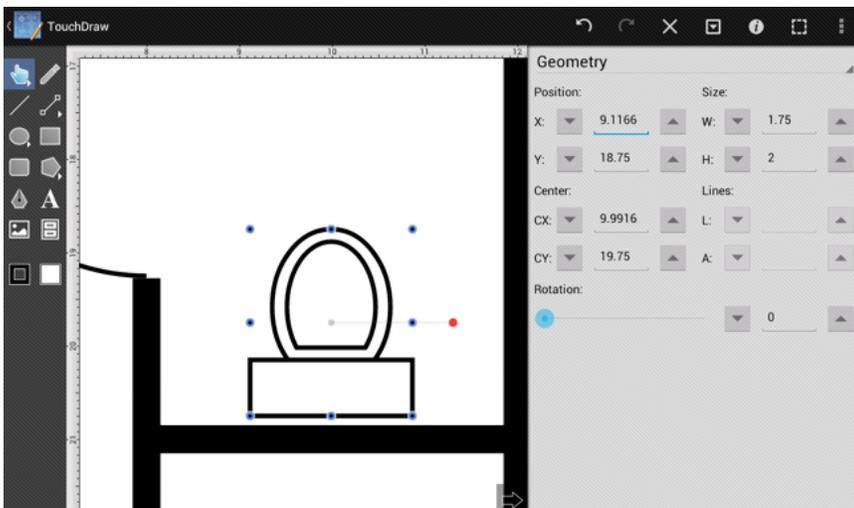
As with the door, the toilet is not scaled correctly due to changes made to the **Points per Unit** setting in an

TouchDraw for Android Floorplan Tutorial

earlier step. As before, this is quickly remedied. Use the [Geometry Panel](#) to edit the width of the toilet to 1.75 and the height to 2.

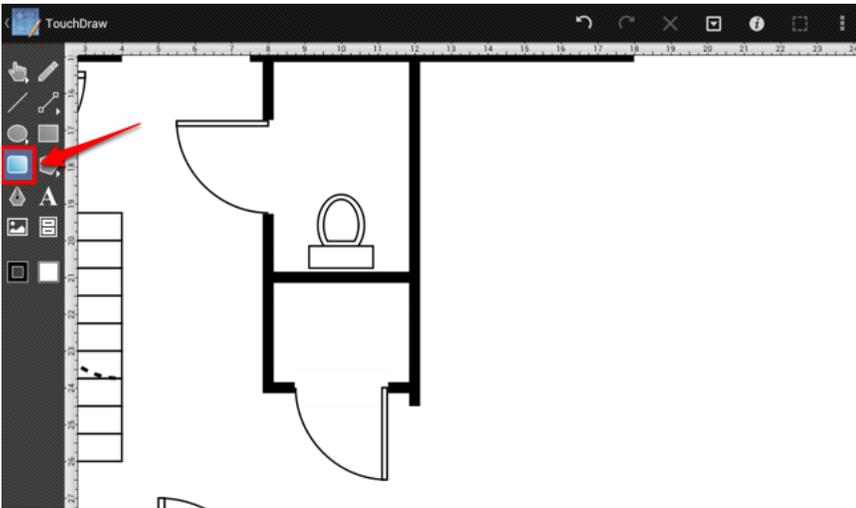


Next, the toilet will either need to be rotated by 180 degrees by using the [Rotate 180°](#) command or flipped with the [Flip Vertically](#) command since it is facing the wrong direction. Drag the toilet into place after it has been rotated or flipped.

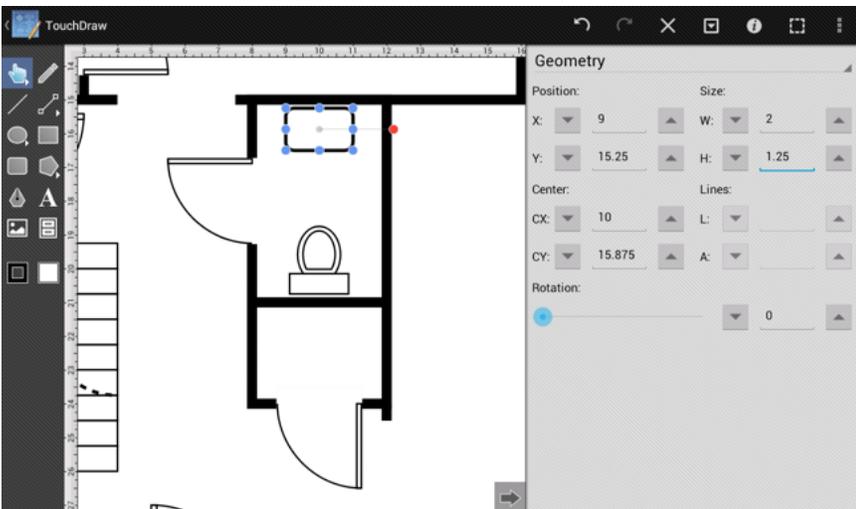


Next, use the [Rounded Rectangle Tool](#) to draw a sink for the bathroom. The **Rounded Rectangle Tool** is located below the [Rectangle Tool](#) in the [Drawing Toolbar](#) (portrait mode). It appears below the [Oval Tool](#) in landscape mode, as shown below.

TouchDraw for Android Floorplan Tutorial



Draw the sink after the tool has been selected.



[Continue to Next Step](#)

21. Step 20 - Adding the Kitchen Layer

The next step is to create a new layer in the drawing for the **Kitchen**.

As with previous steps where new layers were added, the same process must be followed to create a layer for the kitchen.

First, open the [Layers Panel](#).

Second, [lock](#) the **Bathroom Fixtures** layer since no additional changes will have to be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the newly created layer (Layer 8) and rename it to **Kitchen**.

Lastly, make certain the **Kitchen** layer is selected and then dismiss the **Layers Panel** by tapping on the **Hide Sidebar Button** located at the bottom left of the panel.

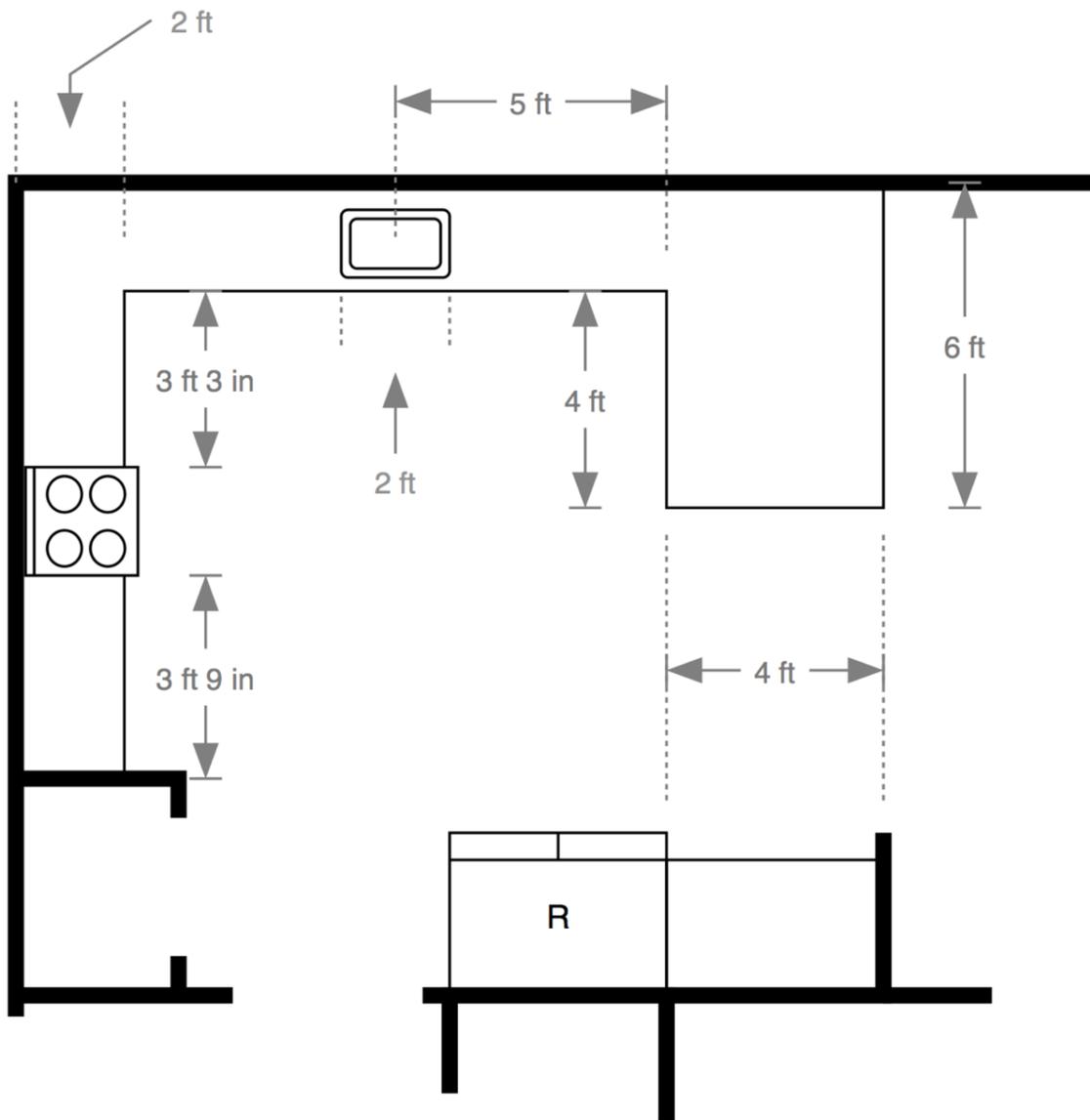
The **Layers Panel** will appear as shown below once the above steps have been completed.



[Continue to Next Step](#)

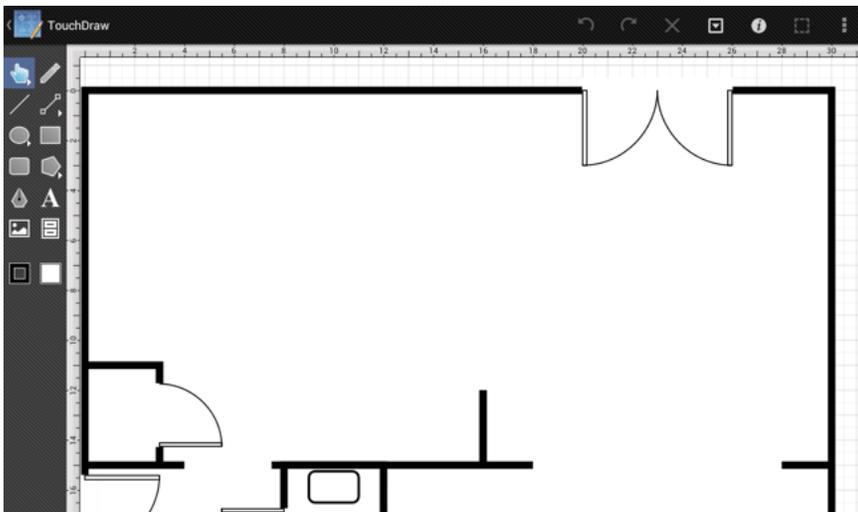
22. Step 21 - Adding the Countertops

Adding the countertops is the first step required to complete the kitchen portion of the drawing. The following diagram outlines the dimensions of everything that is needed to complete the kitchen:

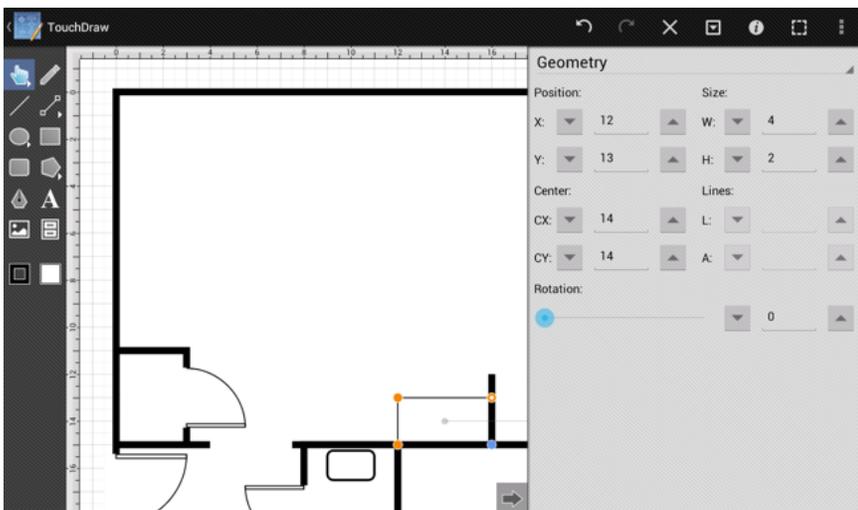


First, [zoom](#) in on the kitchen.

TouchDraw for Android Floorplan Tutorial

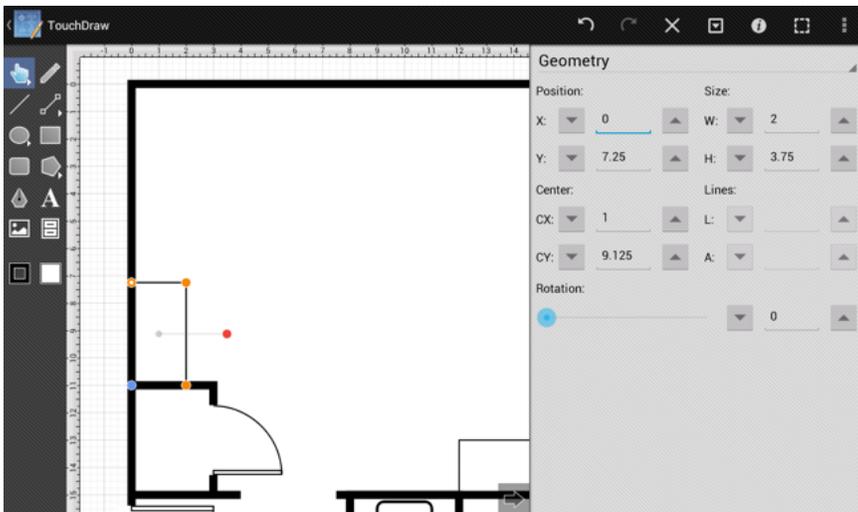


Next, use the [Path Tool](#) to add the each countertop section. Start by adding the smallest countertop, which is located next to the refridgerator.

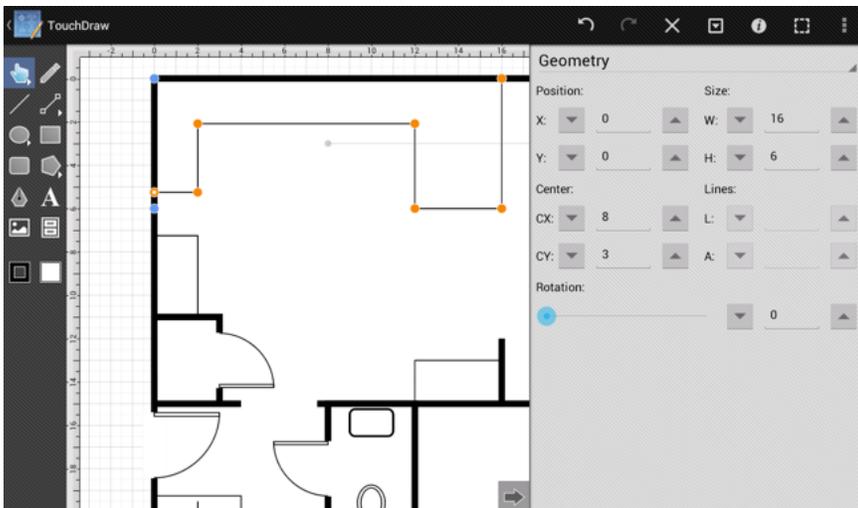


Next, draw the countertop located next to the kitchen closet.

TouchDraw for Android Floorplan Tutorial



Finally, draw the large countertop.



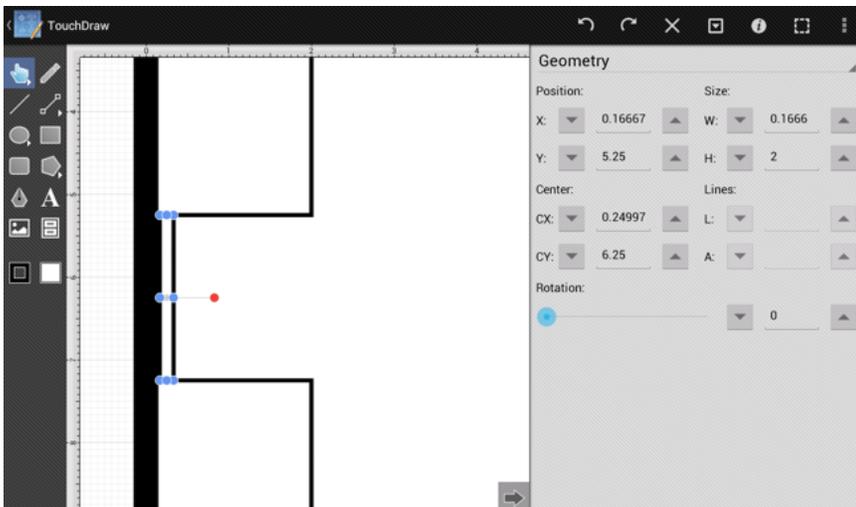
[Continue to Next Step](#)

23. Step 22 - Adding the Appliances

The next step in creating the kitchen is to add the appliances.

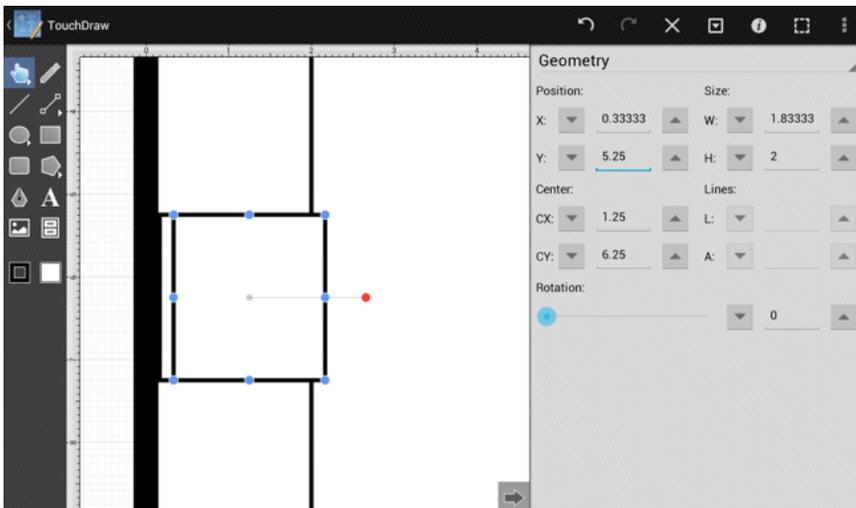
While some appliances are included in the architectural library, it is also easy to create these shapes using the drawing tools provided within the TouchDraw application. In the following steps, the stove and refrigerators are added by using tools in the [Drawing Toolbar](#) to demonstrate how these shapes can be created without making a library selection.

We will start first with the stove/range. First, use the [Rectangle Tool](#) to draw the back panel of the stove/range.

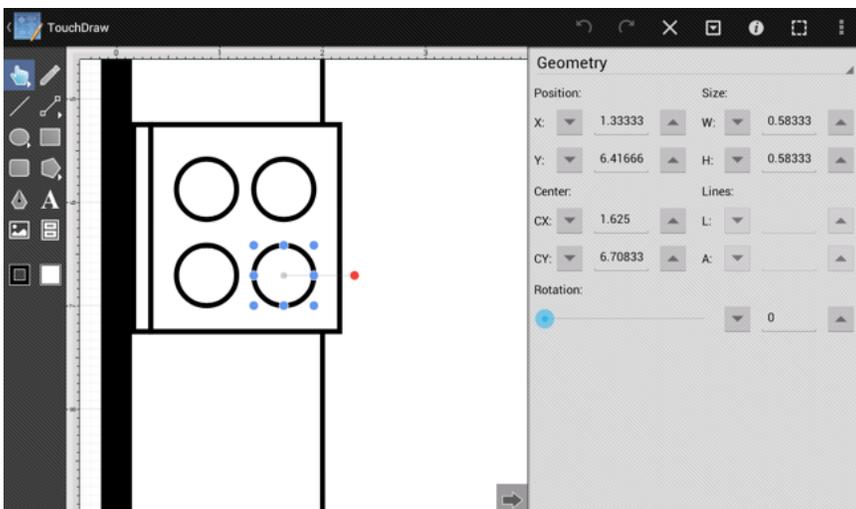


Second, draw the body of the stove/range.

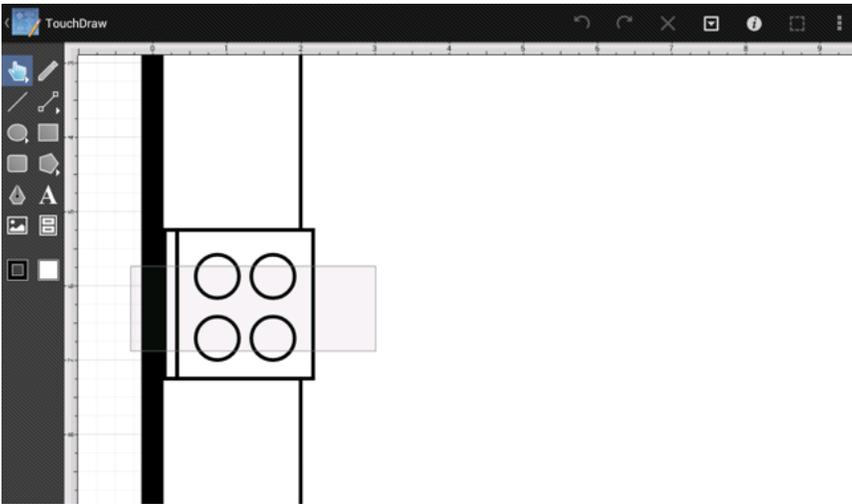
TouchDraw for Android Floorplan Tutorial



Third, use the [Oval Tool](#) to create the burners on the range top.

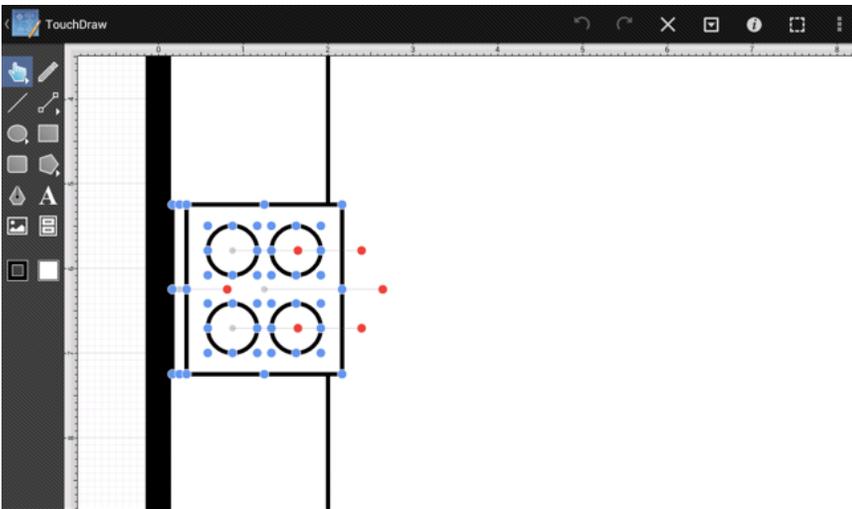


Lastly, [group](#) all of the objects so that the drawn stove/range can be manipulated as one object. To group the stove objects into a single object, draw a **Selection** **Rectangle** around all of the shapes to make a [selection](#).



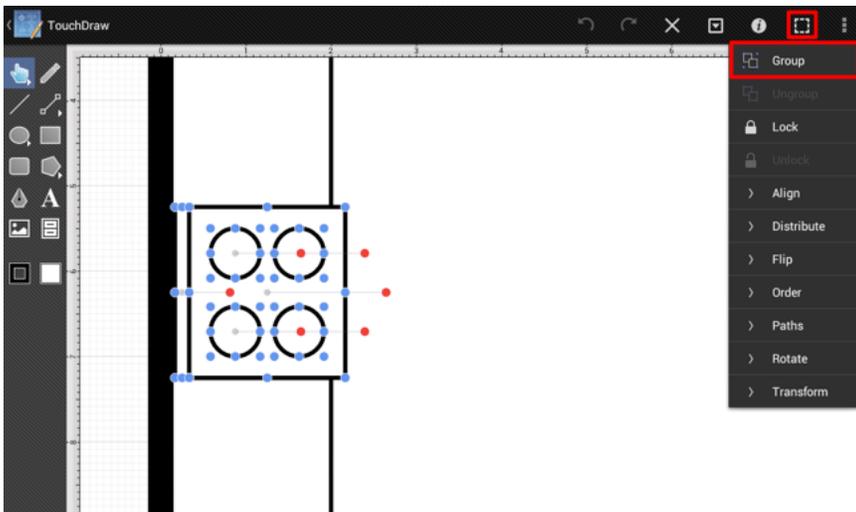
Note: Make certain the drawn selection rectangle is similar to one shown above so that it intersects only the shapes in the stove. Doing so will prevent the complication of inadvertently selecting one of the countertops and adding it to the group.

The range shapes will be selected after drawing the selection rectangle.

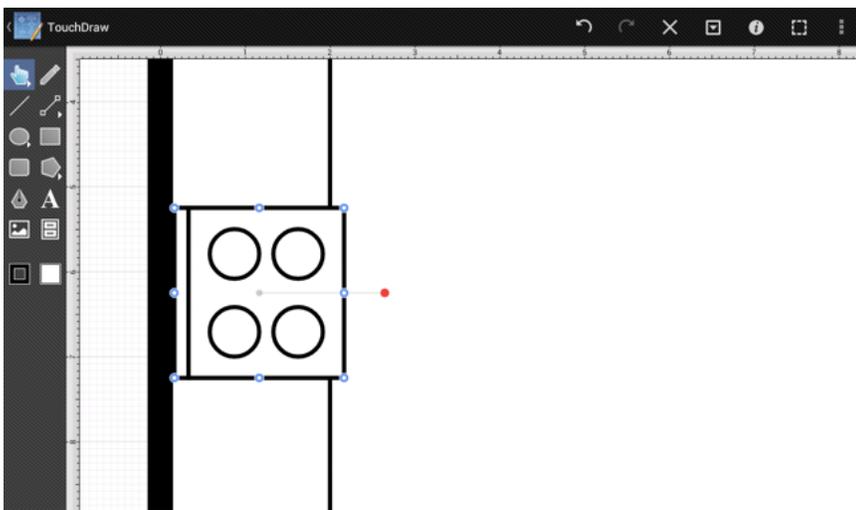


To group the shapes, go to the [Selection Menu](#) and select the **Group** option.

TouchDraw for Android Floorplan Tutorial

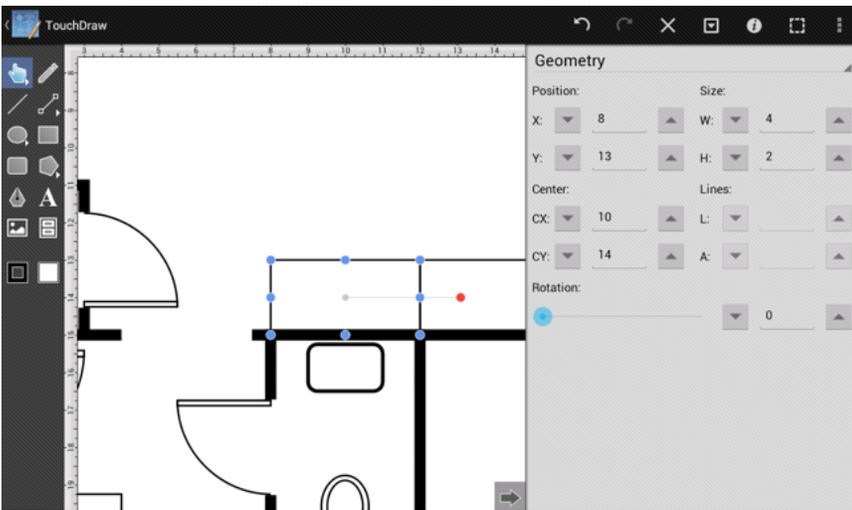


Once the figures have been grouped, only the handles for the grouped figure will be visible as opposed to the handles of each individual figure used to create the stove.

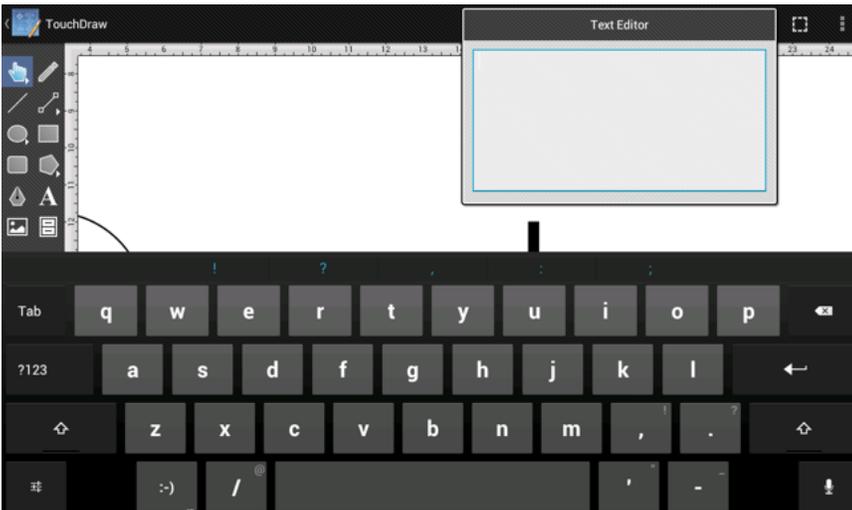


Next, add the refrigerator into the kitchen. Start by drawing the body of the refrigerator with the [Rectangle Tool](#).

TouchDraw for Android Floorplan Tutorial

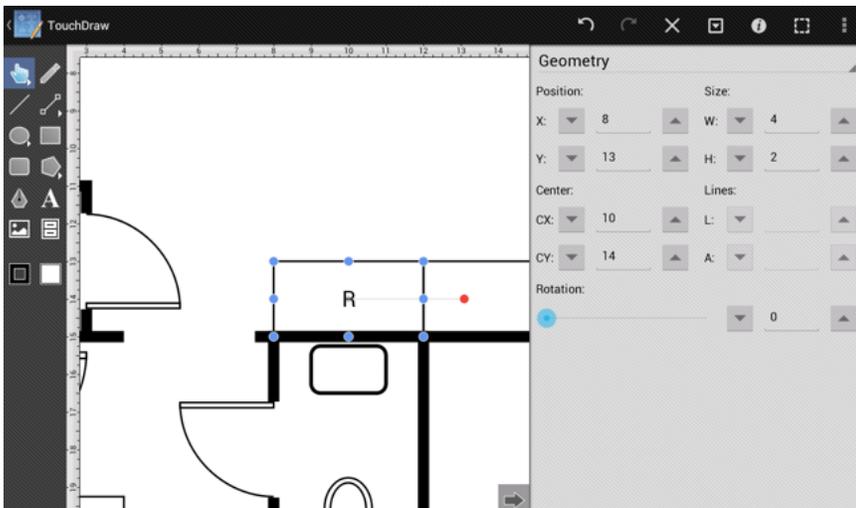


Next, insert an "R" into the drawn rectangle in order to make it more obvious that this object is a refrigerator. TouchDraw makes it easy to add text to any shape. Simply **Double Tap** on the rectangle to bring up the [Text Editor](#).

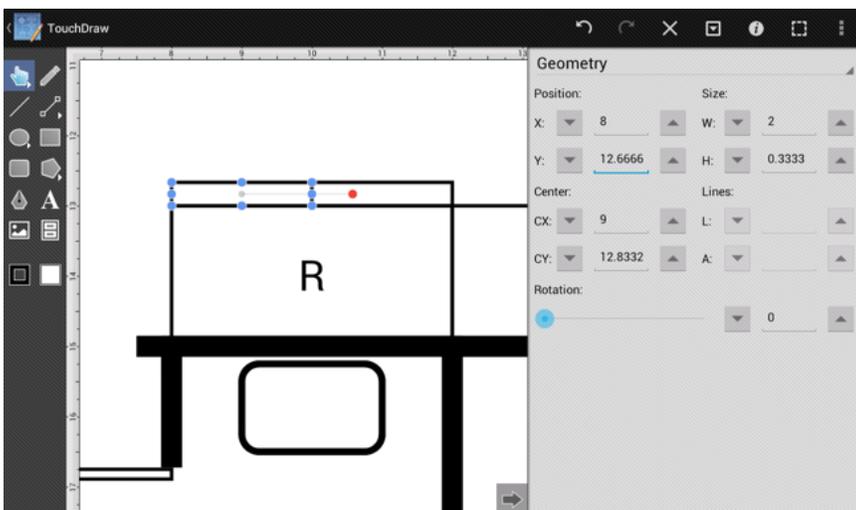


Enter "R" into the **Text Editor** and tap outside of the editor to dismiss it.

TouchDraw for Android Floorplan Tutorial



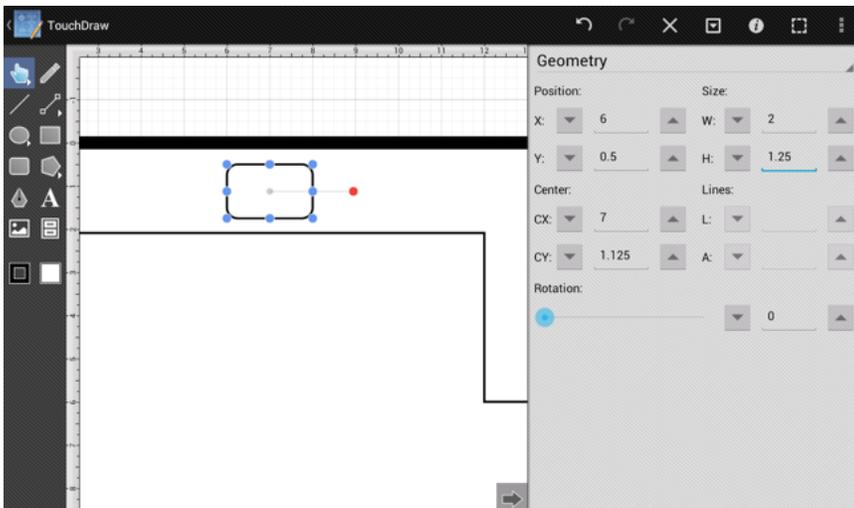
Next, draw the two "side by side" doors for this refrigerator. Use the **Rectangle Tool** as well to draw this portion of the refrigerator.



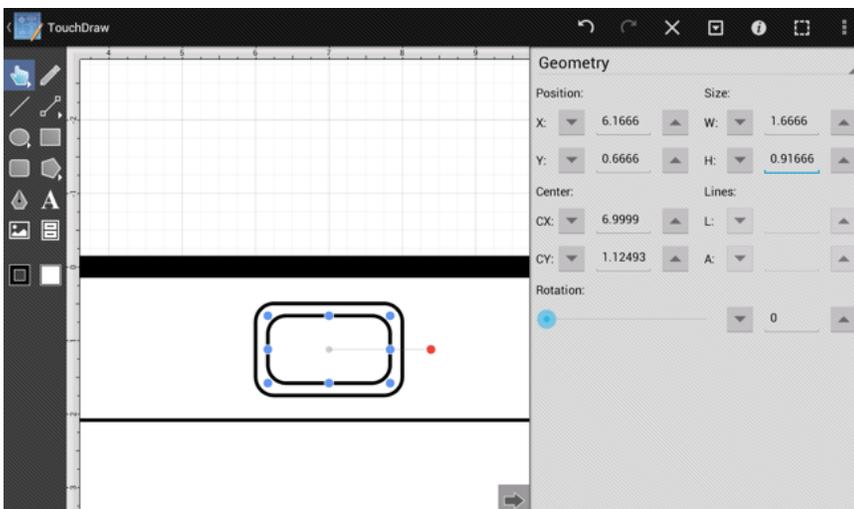
Lastly, add the kitchen sink in the countertop by drawing two [rounded rectangles](#) inside of one another.

First, draw the outer rectangle.

TouchDraw for Android Floorplan Tutorial

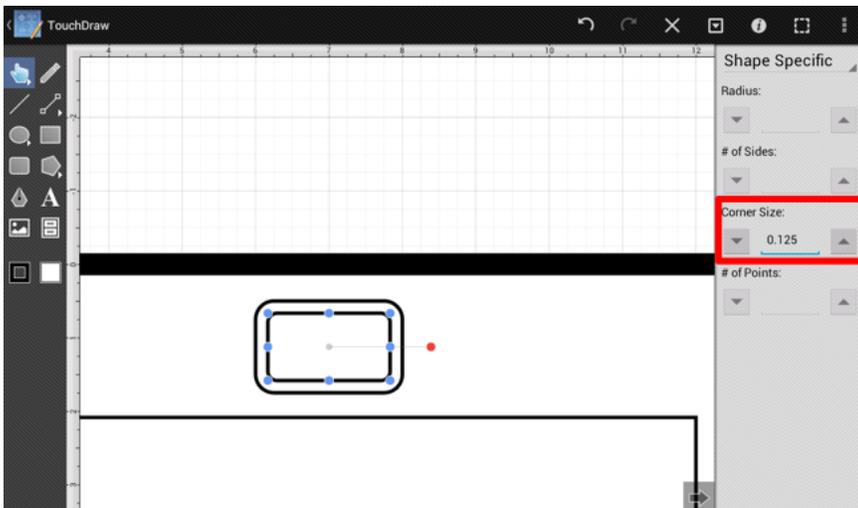


Second, draw the inner rectangle.



Next, to make the two rounded rectangles look nicer next to one another, open the [Shape Specific Panel](#) from the [Selection Menu](#) and edit the size of the **Corner Radius** of the inner rounded rectangle. The appropriate value in this specific tutorial is .125.

TouchDraw for Android Floorplan Tutorial



We've now completed the kitchen.

[Continue to Next Step](#)

24. Step 23 - Adding the Dimensions Layer

The next step is to create a new layer for adding the dimension lines.

As with previous steps where new layers were added, the same process must be followed to create a layer for the **Dimensions**.

First, open the [Layers Panel](#).

Second, **lock** the **Kitchen** layer since no additional changes will be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the newly created layer (Layer 8) and rename it to **Dimensions**.

Lastly, make certain the **Dimensions** layer is selected and then dismiss the **Layers Panel** by pressing on the **Hide Sidebar Button** located in the bottom left of the panel.

The **Layers Panel** will appear as shown below once the above steps have been completed.

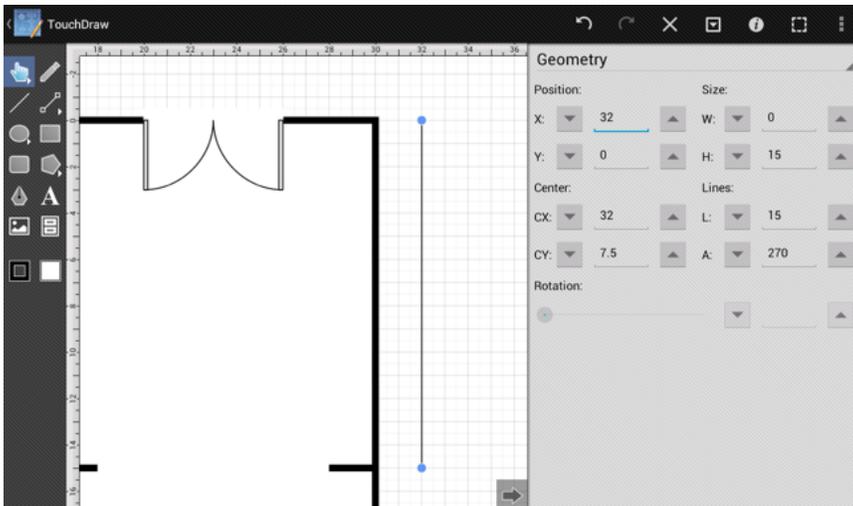


[Continue to Next Step](#)

25. Step 24 - Adding the Dimension Lines

The next step in creating the floor plan drawing is to add the dimension lines. TouchDraw makes it easy to create dimension lines in a drawing.

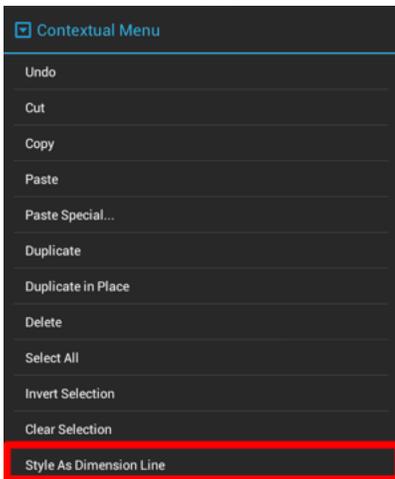
First, use the [Line Tool](#) to draw the line that will make up the dimension line. Start by drawing the dimension line for the vertical size of the dining room.



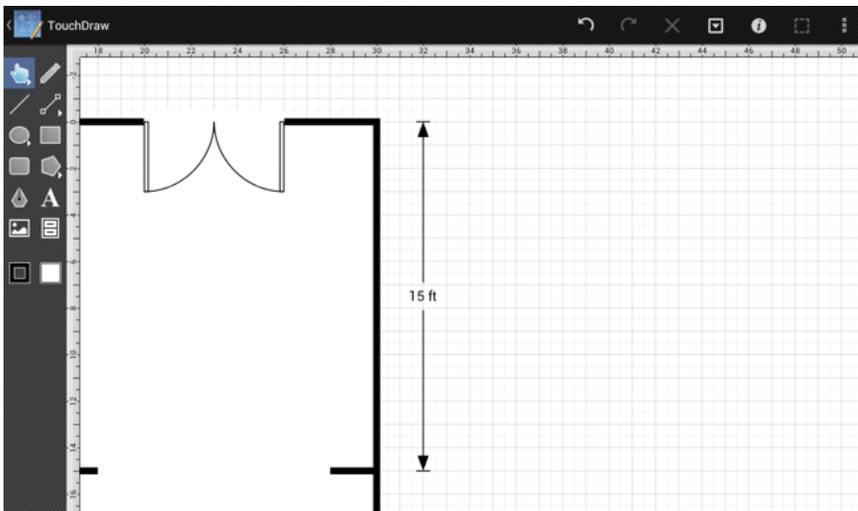
Next, **touch and hold** on the created line or press on the **Contextual Menu Button** in the [Top Toolbar](#) to bring up the [Contextual Menu](#). The contextual menu includes an option called **Style as Dimension Line** when the currently selected shape is a line.



TouchDraw for Android Floorplan Tutorial



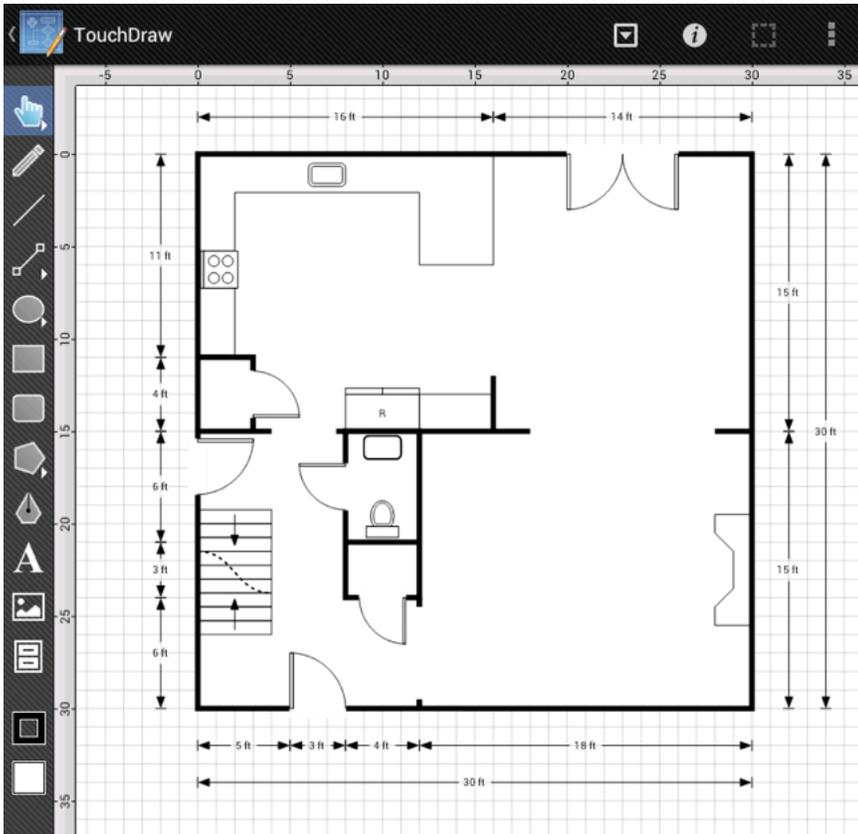
The line will be turned into a dimension line with an auto-filled length and arrowheads on each end when this option is selected.



Use the same process as above to create the additional dimension lines for the drawing. A few shortcuts are available for speeding up the creation of dimension lines. We have created the following video to demonstrate the steps outlined above as well as to show a quick method for drawing the rest of the dimension lines with a minimal amount of effort.

The **Floor Plan** should appear as below once all dimension lines have been completed.

TouchDraw for Android Floorplan Tutorial



[Continue to Next Step](#)

26. Step 25 - Adding Room Names Layer

The next step is to create a new layer for adding the room names.

As with previous steps where new layers were added, the same process must be followed to create a layer for the **Room Names**.

First, open the [Layers Panel](#).

Second, [lock](#) the **Dimensions** layer since no additional changes will need to be made.

Third, press on the [Layers Settings Menu](#) and select the **Add Layer** option to create a new layer.

Fourth, as before, triple tap on the newly created later (Layer 10) and rename it to **Room Names**.

Lastly, make certain the **Room Names** layer is selected and then dismiss the **Layers Panel** by tapping on the **Hide Sidebar Button** in the bottom left corner of the panel.

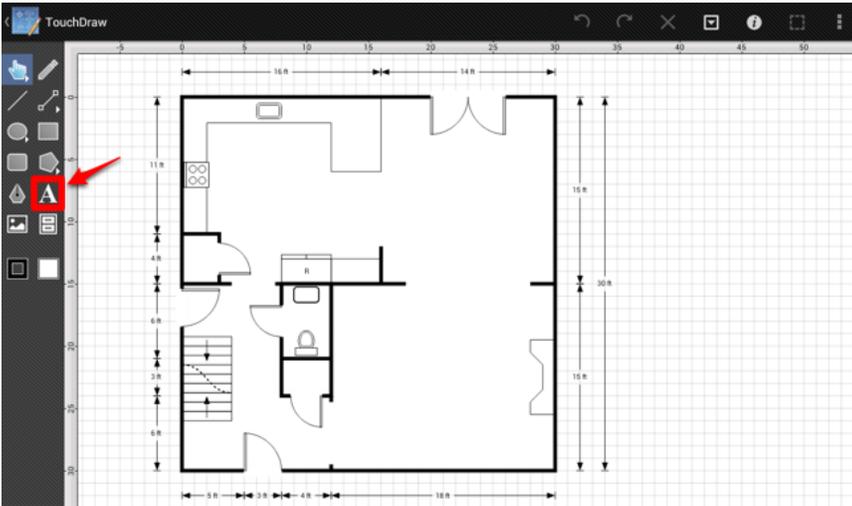
The **Layers Panel** should appear as shown below once all steps have been completed.



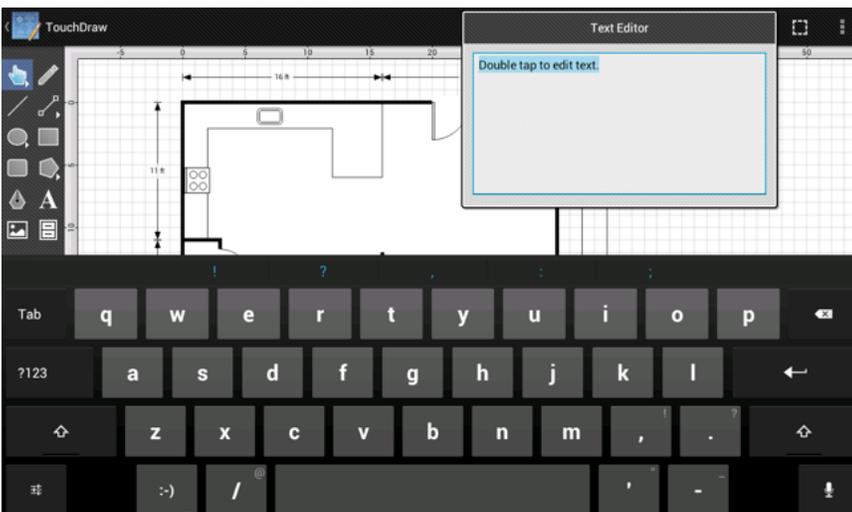
[Continue to Next Step](#)

27. Step 26 - Adding the Room Names

The final step in this tutorial is to add text areas for labeling the rooms with their appropriate names. Use the [Text Tool](#) to label each room.

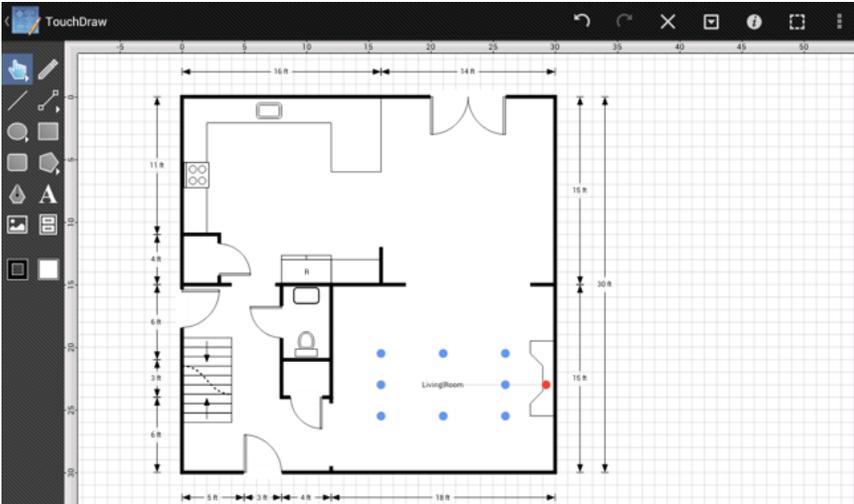


After selecting the **Text Tool**, tap in a location in the drawing to insert a text box. TouchDraw will insert a text box and immediately open the **Text Editor** for entry.

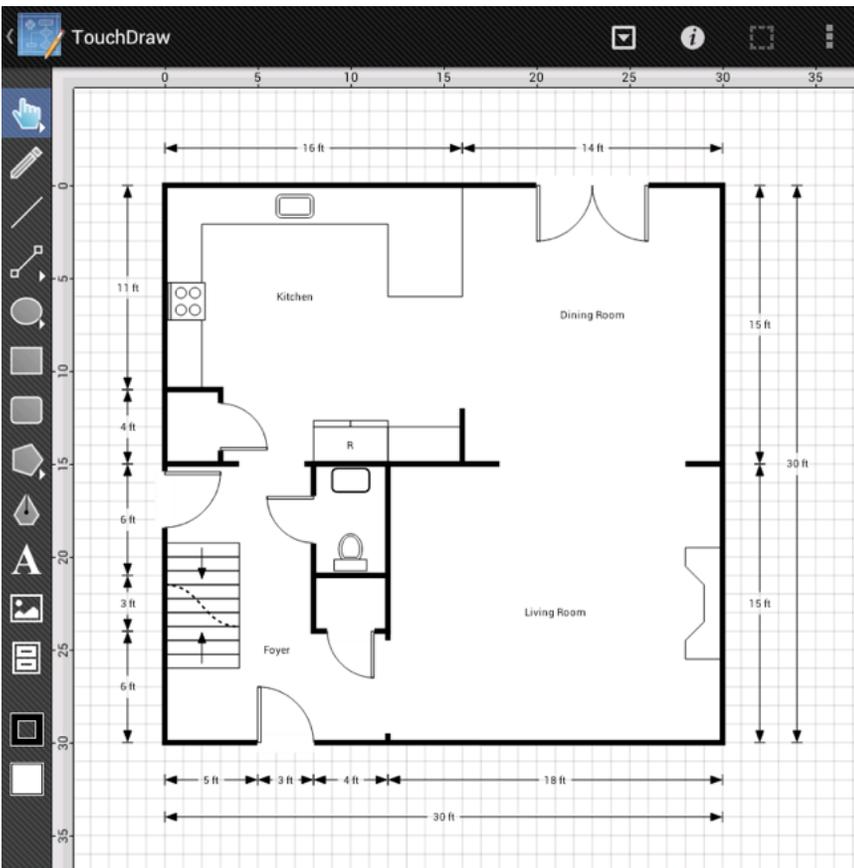


TouchDraw for Android Floorplan Tutorial

Enter the name of the room into the text box and then tap anywhere within the [Drawing Editor](#) to close the **Text Editor**.



Repeat the process for the rest of the rooms (Dining Room, Kitchen and Foyer) in the floor plan.



And with that last step, we have completed the drawing.