

MONKEY BRACKETS

4x4 Pergola Installation Instructions

Tools needed:

Screw gun
#2 square head bit
Hammer drill
1/2" Concrete drill bit at least 6" long
Square 4" or larger
Pencil
Sander with sanding paper
Circular saw (to notch corners, a sander can also be used but will take longer)
Level
2x Ladders
Racket for base plate bolts
4 People

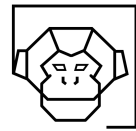
Hardware included:

4x- 4x4 3 way connectors
4x- 4x4 base plates
128x- 2" screws
128x- screw washers with snap cap connections
128x- snap cap covers

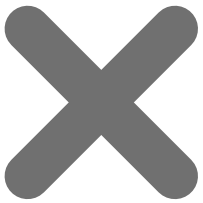
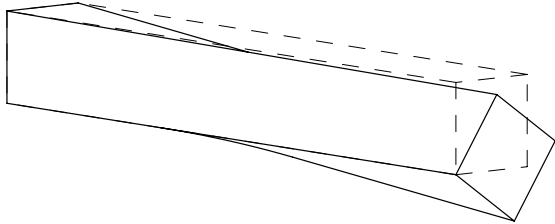
Hardware or Materials needed but not included:

16x- 5/16" 6" stainless steel threaded rod
16x- 5/16" stainless steel washers
16x- 5/16" stainless steel nuts or cap nuts
Anchoring Epoxy for threaded rod

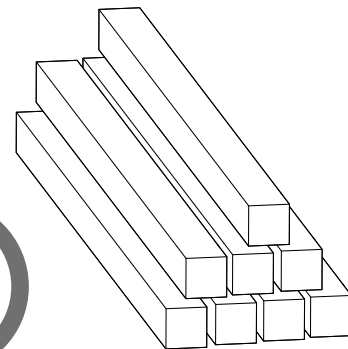
Step 1: Choosing your lumber.



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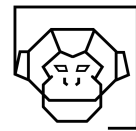
**Make sure your lumber is straight with no twist or bends.
Use lumber 12' or under**



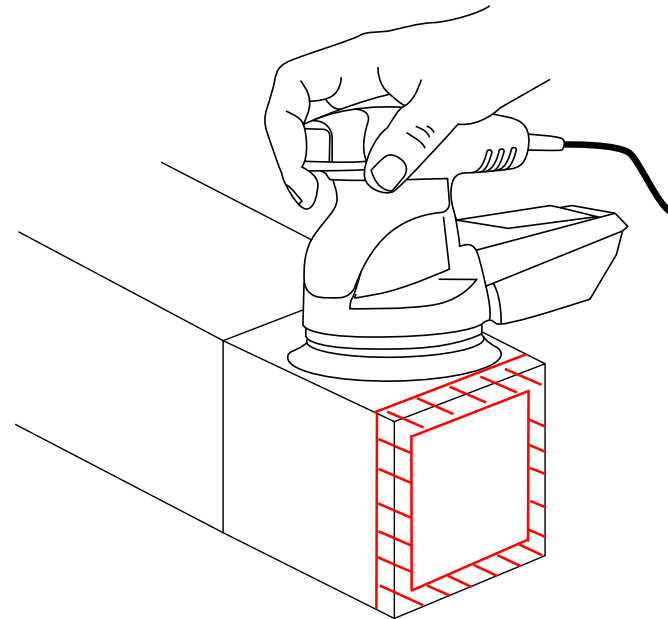
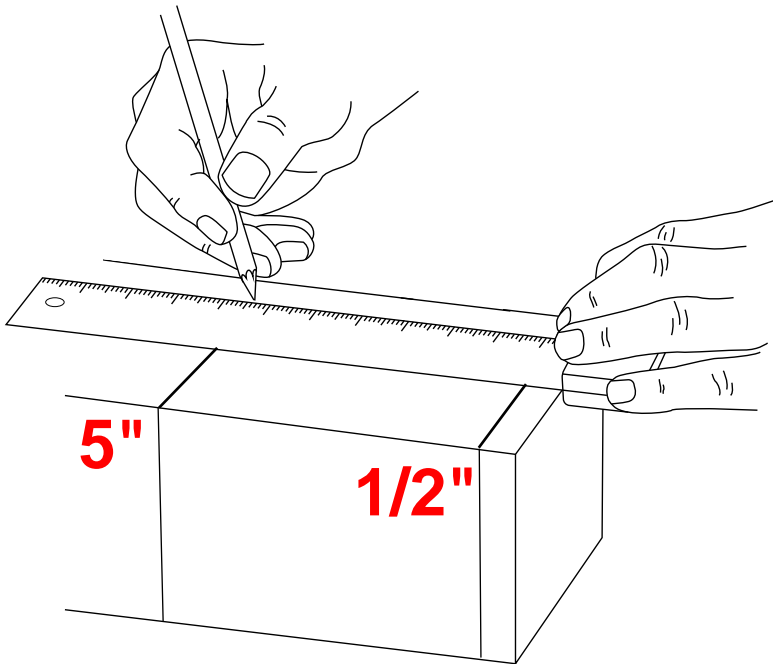
1-2 weeks

Allow time for wood to dry after purchasing. This will reduce swelling

Step 2. Prepping horizontal 4x4s

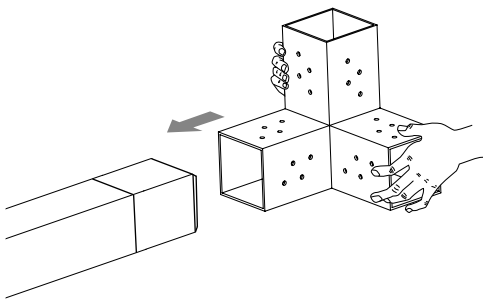


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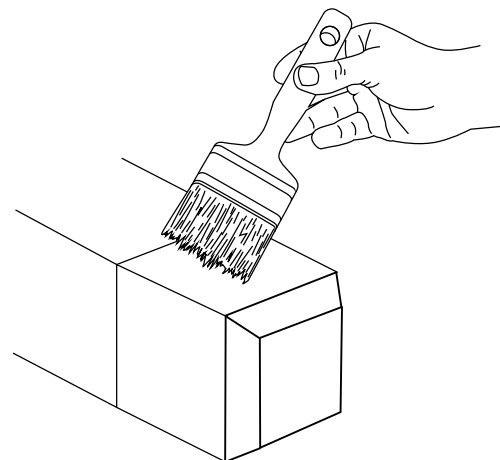


For Horizontal 4x4 pieces, use a square to mark 1/2 inch and 5 inches from the end, all the way around the 4x4

To make space for the interior welds on the corner brackets, sand down or cut off the end at an angle to the half way mark. It is also recommended to sand down rough edges and imperfections on each board.

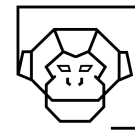


Make sure all horizontal wood pieces can slide easily in brackets, up to the 5" line, on both sides of the board. If not, continue to sand or notch piece until it does

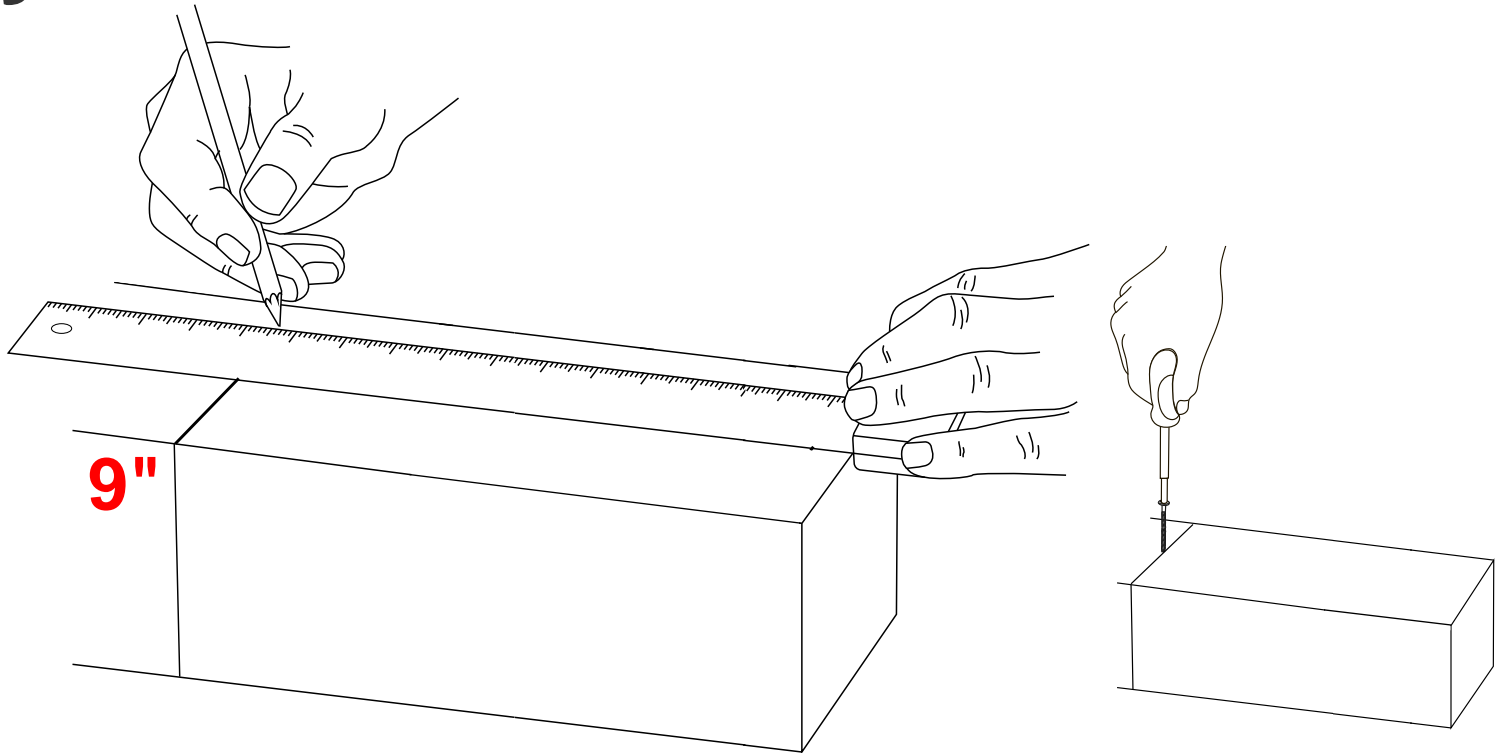


After all horizontal pieces are fit and ready to install we recommend you stain or seal your wood including the end grains.

Step 3. Prepping your vertical 4x4s

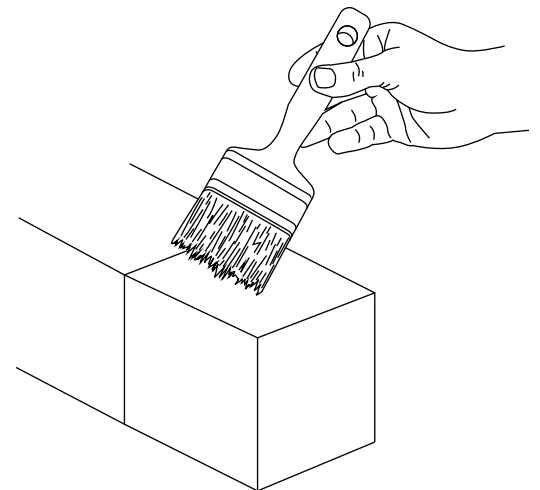
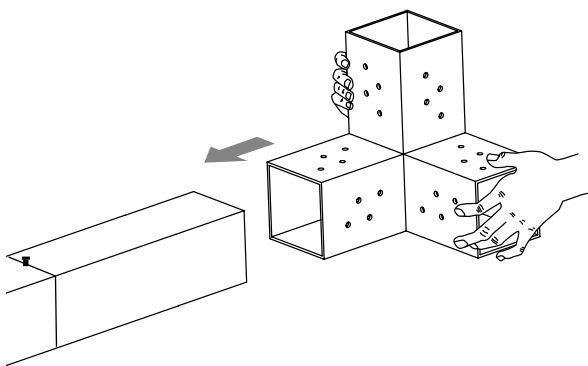


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For Vertical 4x4 pieces, use a square to mark 9 inches from the end, all the way around the 4x4 on one side. Repeat the same but 5" from the end on the other side of the vertical pieces.

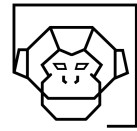
Using one of your screws, insert it into the 9" mark. This is the end that will go into the 3 way brackets. This is a temporary placement screw. This will be removed later.



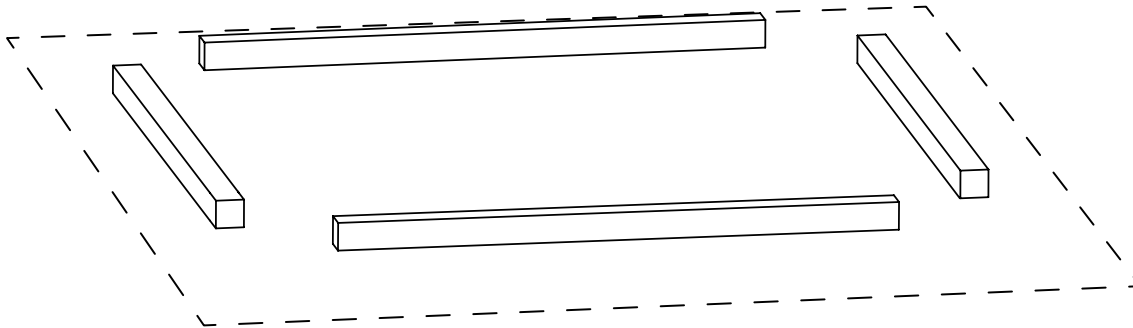
Make sure the 9" ends of the 4x4 can easily slide through the 3 way bracket up to the placement screw. If it doesn't, sand down until it does. Repeat the same with the other end and the base plate.

After all vertical pieces are fit and ready to install we recommend you stain or seal your wood including the end grains.

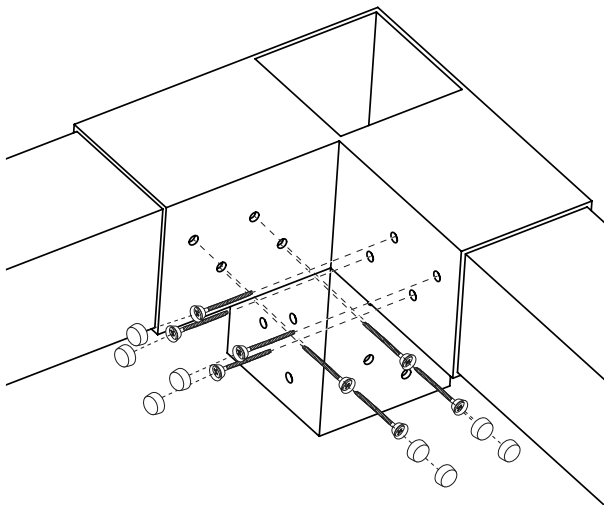
Step 4. Horizontal assembly



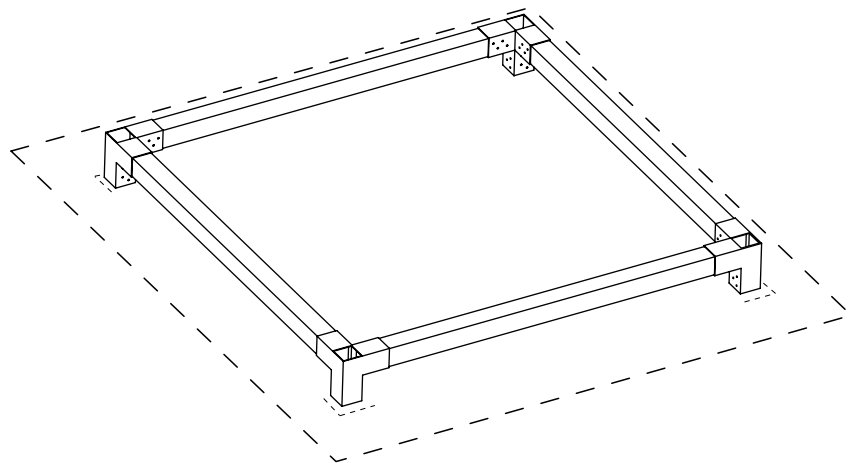
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Place your horizontal 4x4s in a square pattern around your perimeter. Place 3 way connectors on cardboard in corners. Do not let 3 way brackets touch the bare ground to prevent scratching

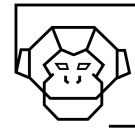


Grab the 4x4s and a 3 way connectors and slide them together with the pass through pieces being vertical. Screw in one 2" screw with plastic snap washer, to hold each 4x4 to connectors. Push on snap caps. Repeat this process until all 4 connectors and 4x4s are connected. The remaining underside screws can be installed after the structure is raised.

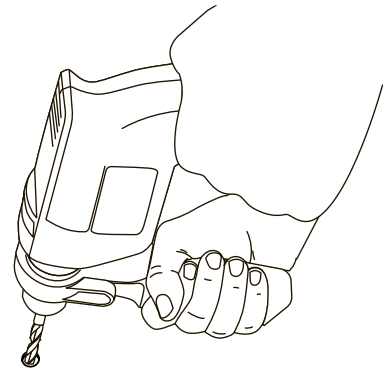
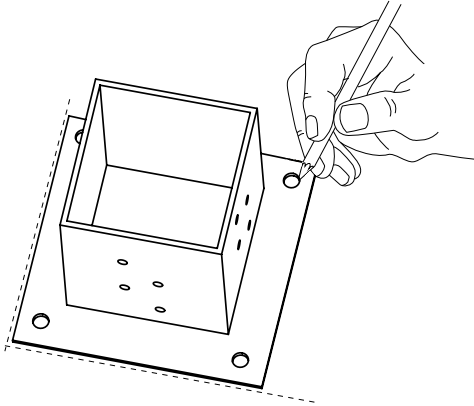


Position square where it will be installed, and draw the outer perimeter with a line 1.5" from the bottom of the 3 way connectors. This will be the guide for the base plates. Make sure to continue to not let hardware come in contact with ground as it will scratch. Set aside square to allow space to install bottom brackets

Step 5. Installing base plates



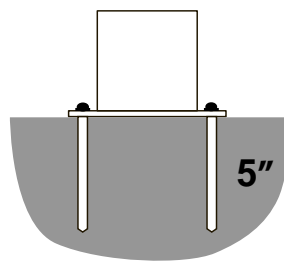
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Drill 6" deep
1/2" wide

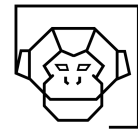
Align your 4x4 base plates over the areas previously marked on your concrete, and mark the placement of the holes. Set base plates aside.

Using a hammer drill concrete 5" deep, with a 1/2" bit. Clean out holes and dry fit 6" long, 5/16" stainless steel threaded rod (not included). This should stick out roughly .8 -1". Remove bolts and fill up about halfway with anchoring epoxy (not included) according to the epoxy's instructions

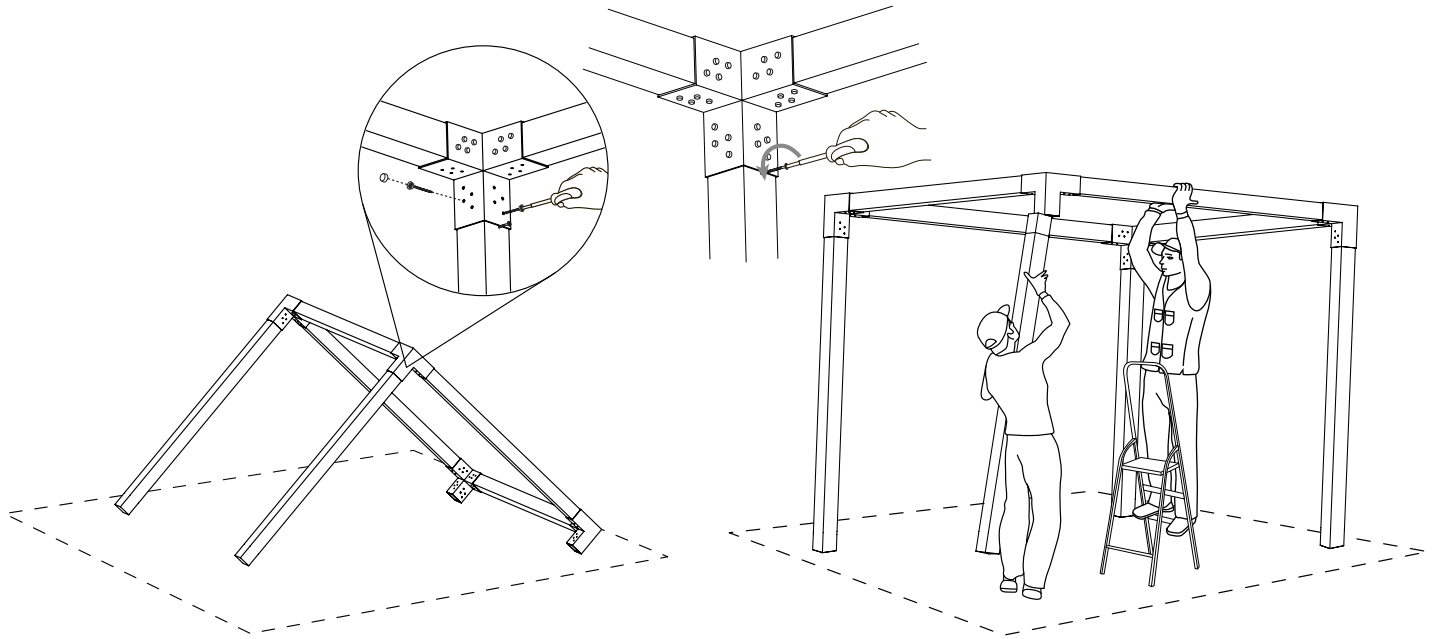


Insert bolts and wipe away purged epoxy. Make sure exposed threads do not have epoxy on them. Once epoxy is cured, place 4x4 base plates over the screws and bolt down with washers and nuts (not included).

Step 6. Installing legs

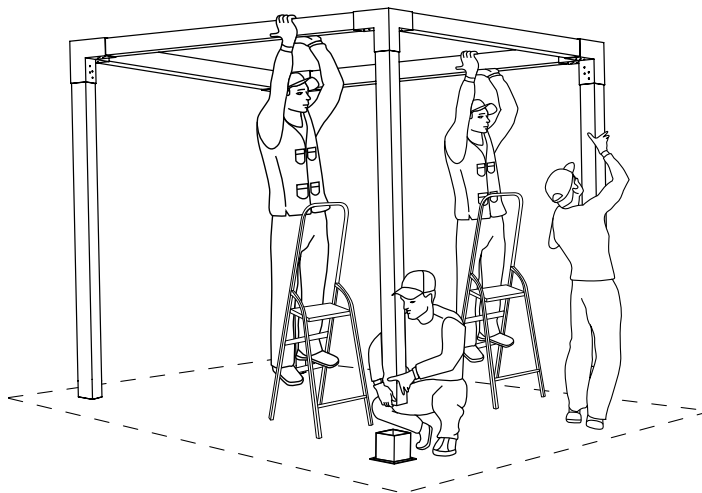


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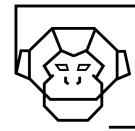
Tilt installed square on its side and insert two legs into pass through pieces until it reaches placement screws. Screw in 2 screws into each vertical and then remove the placement screws.

Repeat this for the remaining side.

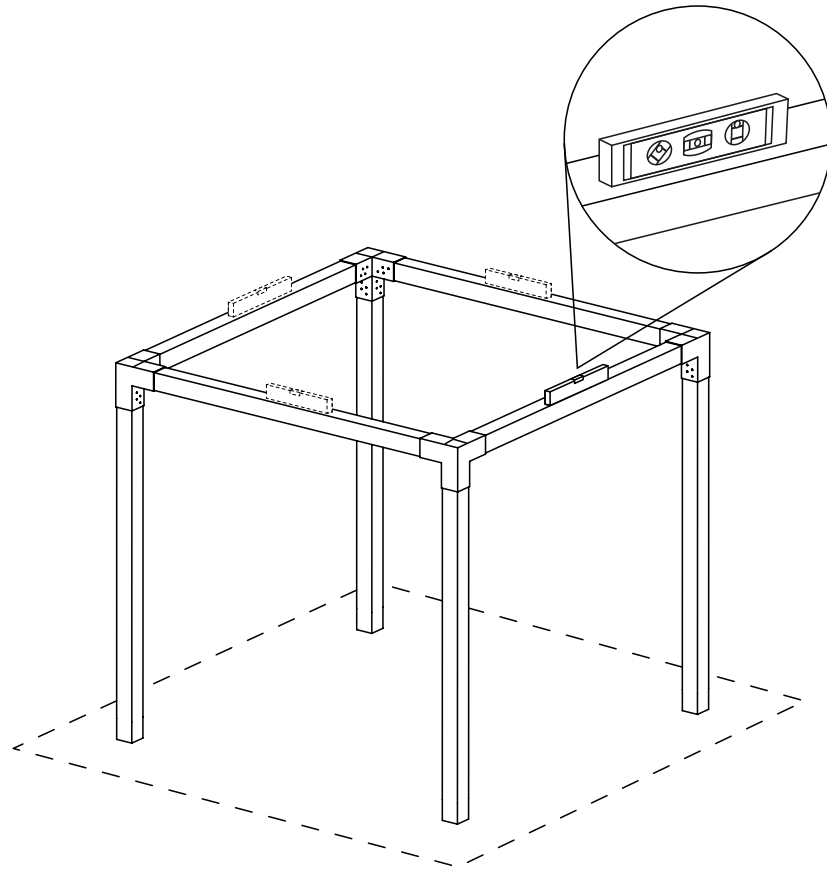


Lift each leg into previously installed bottom brackets

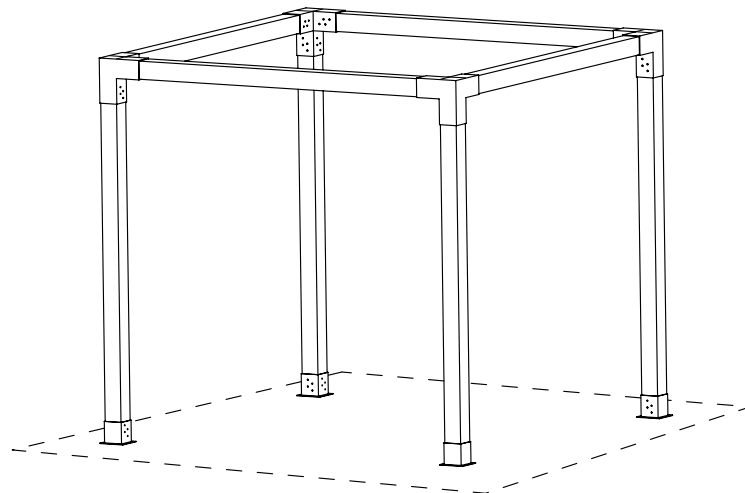
Step 7. Leveling



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Make sure all the horizontal top pieces are level. If not, adjust low end of 3 way brackets to be level with the high point



Make sure the sides are level. Install remaining screws, with snap cap screw washers. Pop on black snap caps