

3D DIY Wood Snowflake

About
Me

Another year, another snowflake. At least that's what it's beginning to look like. I'm going to jump right into this because, holy crap this post is kind of on the longer side. I tried to simplify it by adding measurements and details to the images themselves. I have also come to realize that my brain works best off of imagery and visualization.

I think.

For this 3-D snowflake, I purchased two 8 ft boards at under \$3 a piece. (.75" x 1.5" x 8') I had enough scrap leftover to make a smaller version as well. I'm thinking six dollars for two 3-D snowflakes isn't too bad. I also used two small scraps from a 1x6" board to make the small hexagons for the snowflake center.

And one last thing. If you do not have a good relationship with your miter saw already, then this will be the perfect opportunity to create a lasting bond between the two of you. Maybe even give it a name like "Bevel-ry" or "Miter-ly".

Here's a photo of my bevel set to 30°.



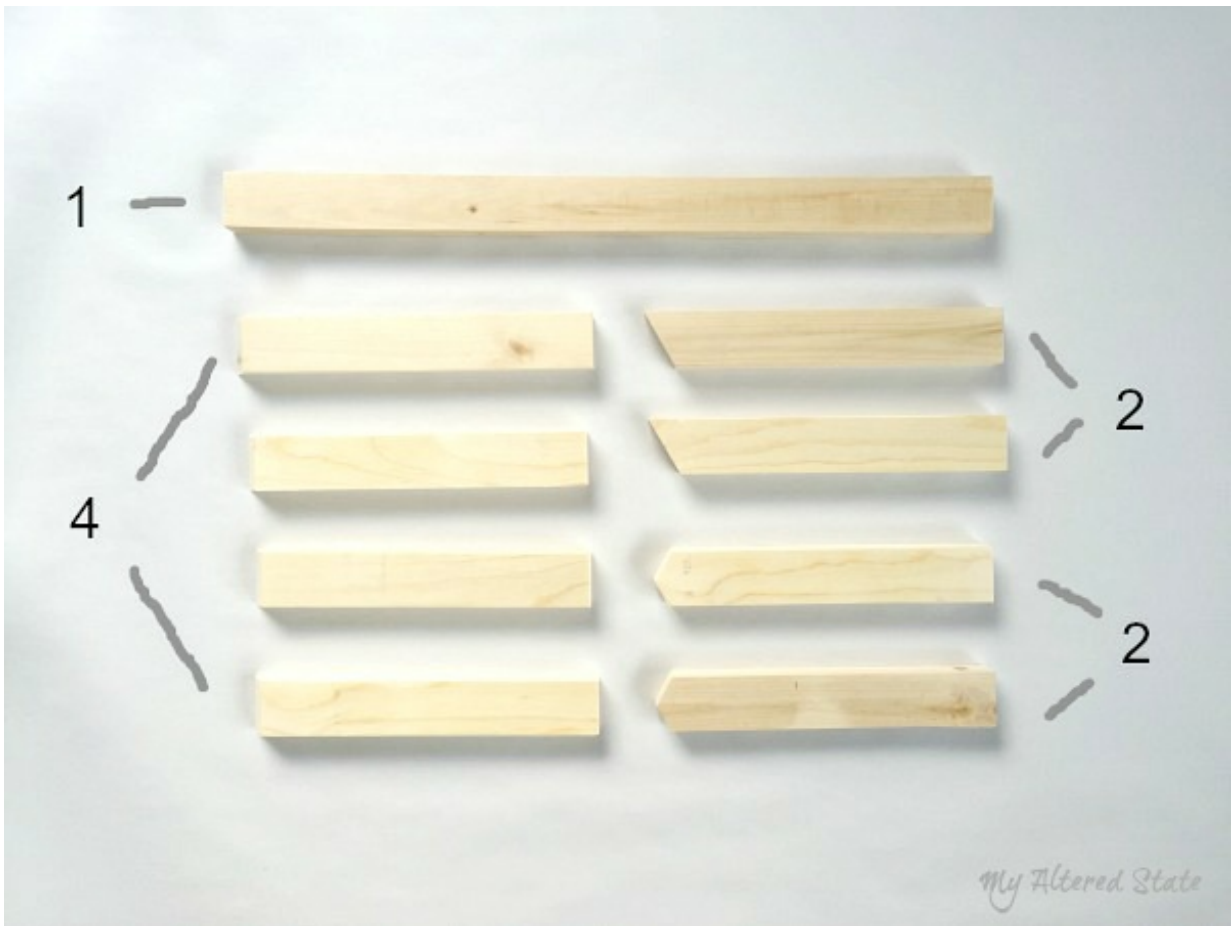
3D
Wood
DIY
Snowflakes
My Altered State



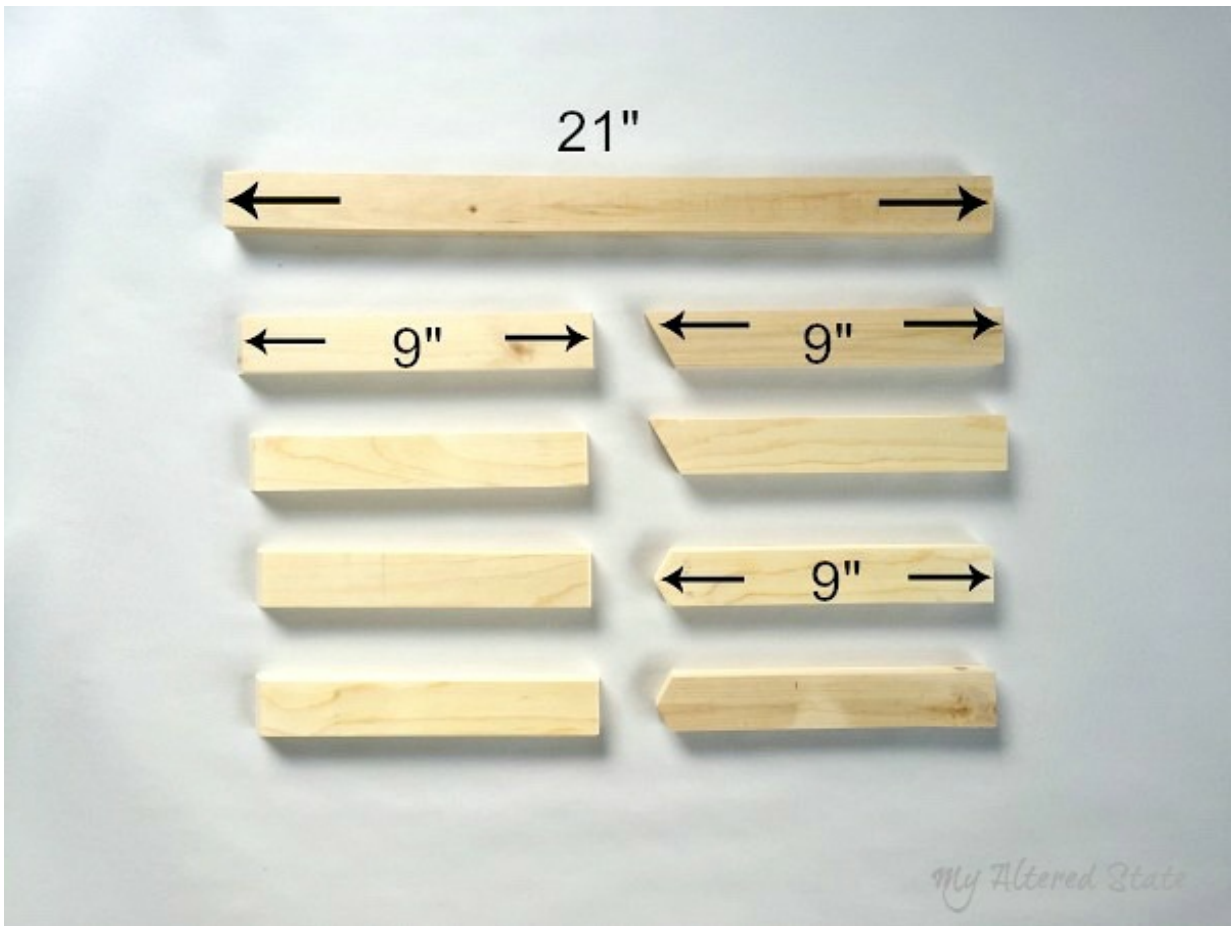
Now with that photo setting the stage, let's proceed to this photo-heavy tutorial.

Part 1: Snowflake arms.

The pic below shows one long piece, and 8 shorter ones.

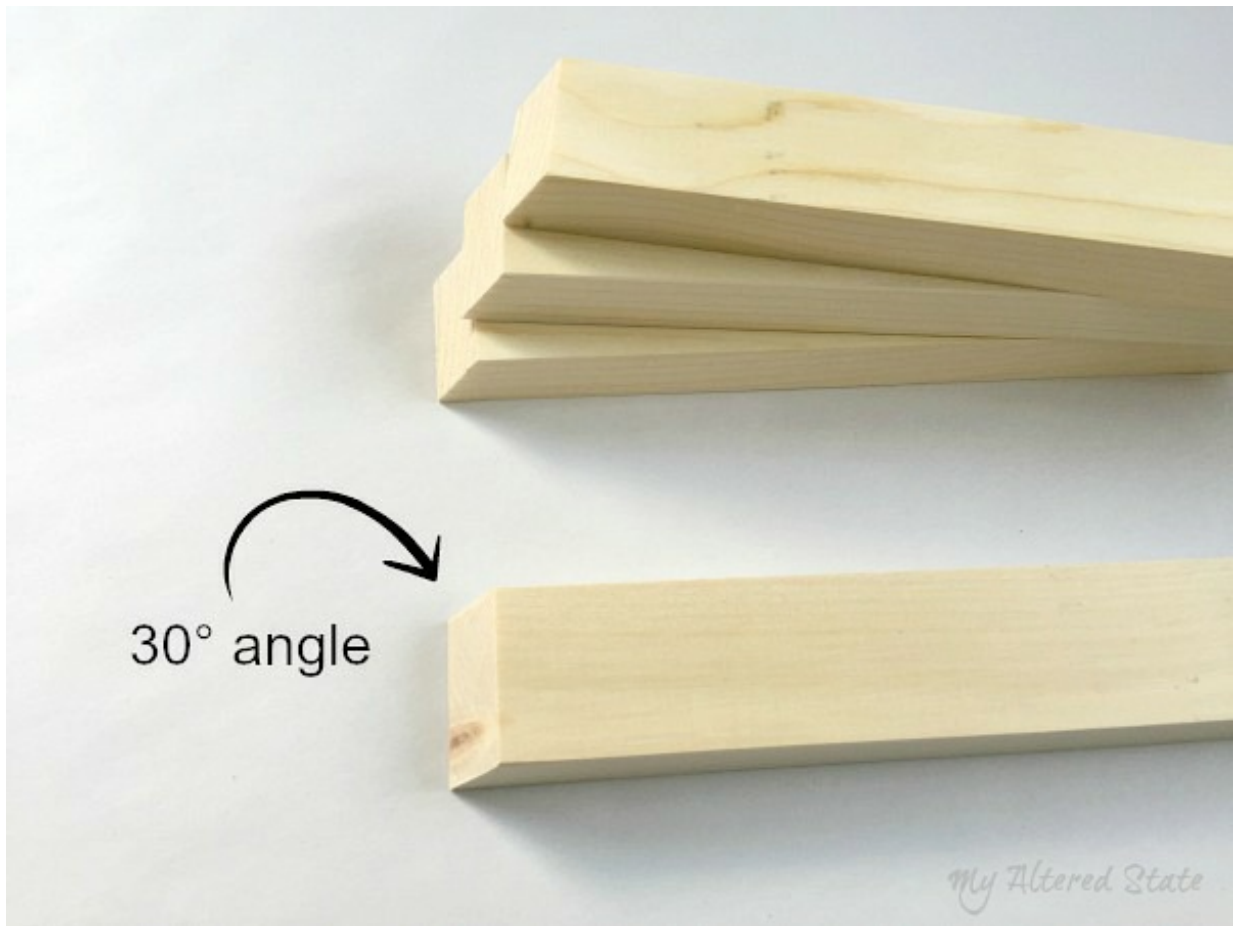


The next image indicates the measurements of each piece.

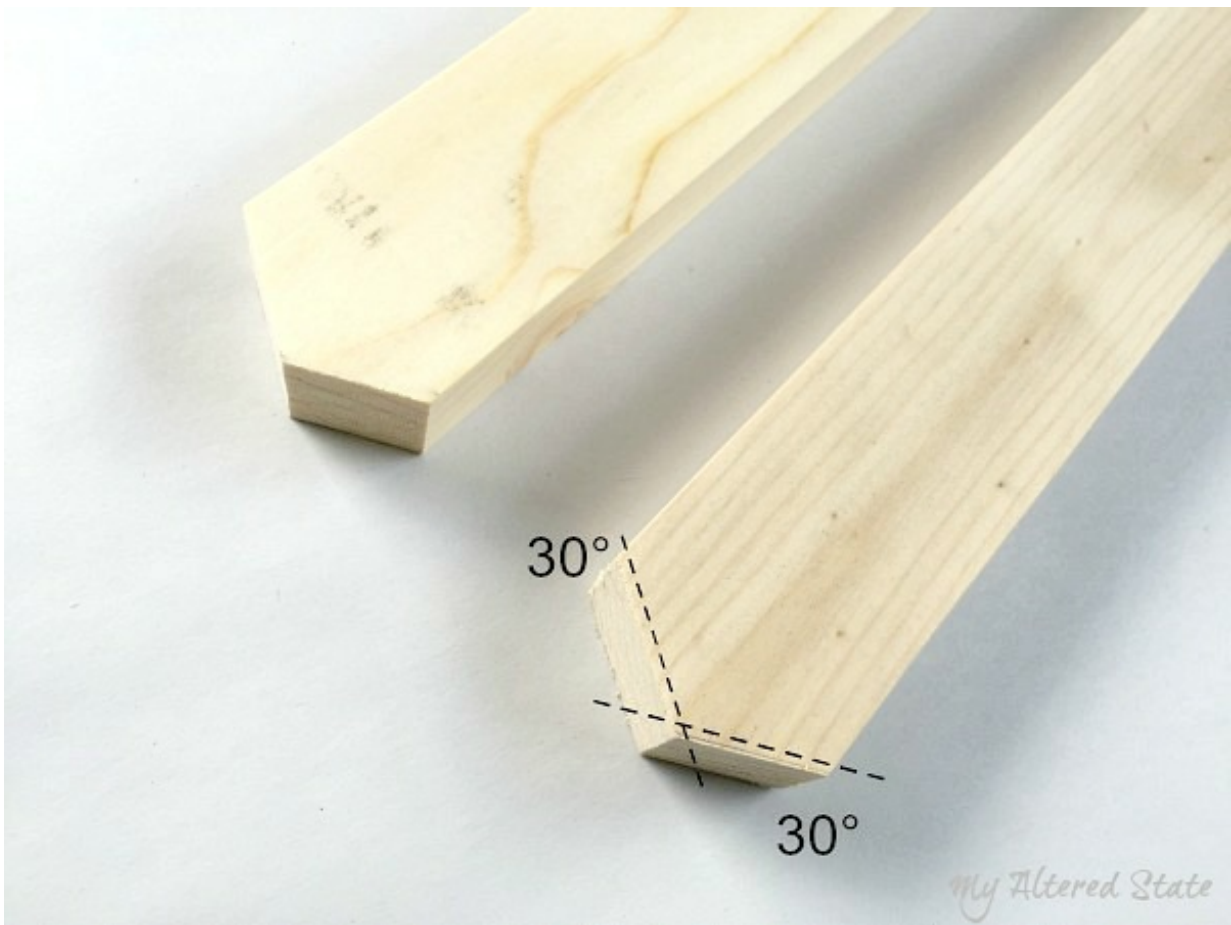


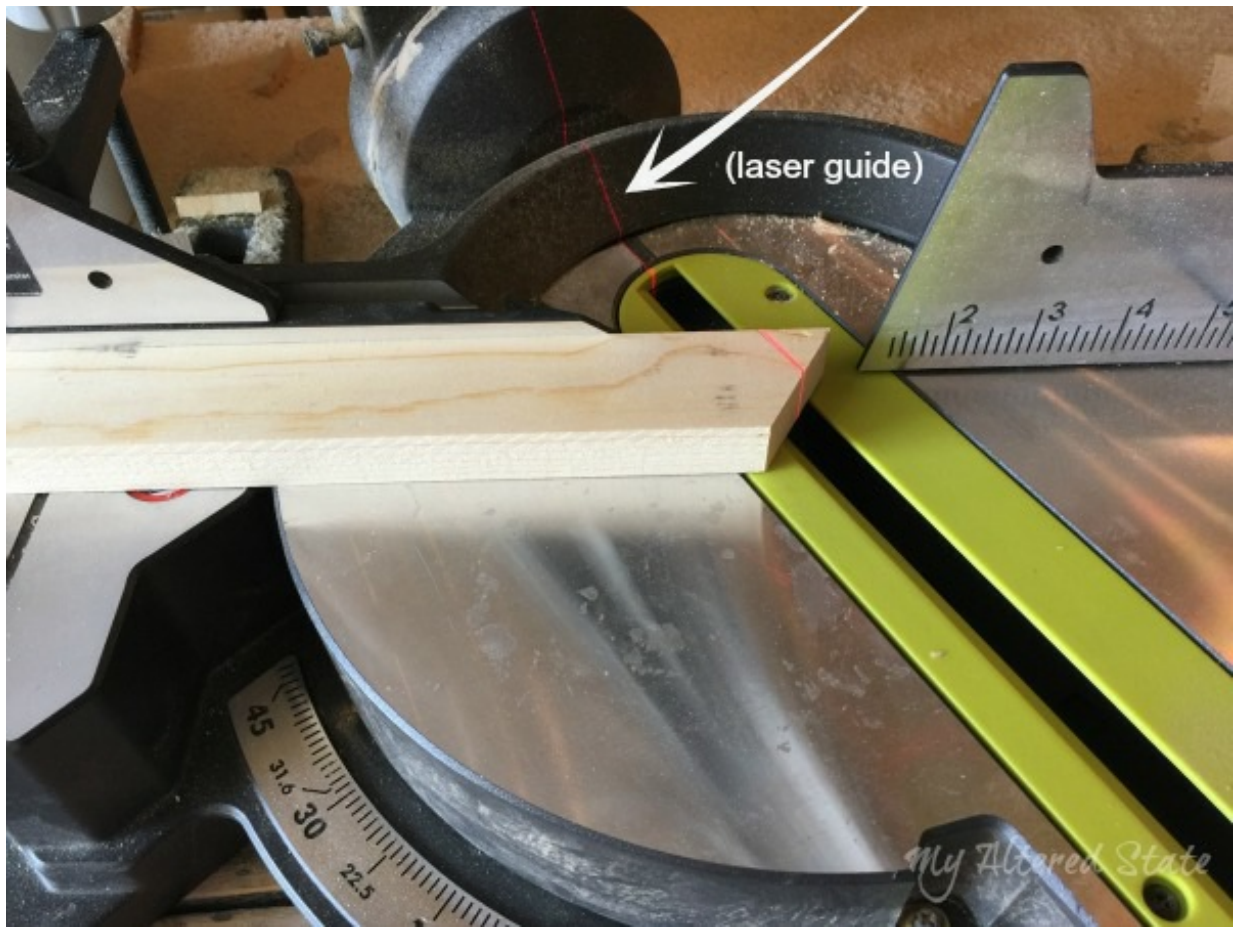
Breakdown of the cuts:

I did a 30° bevel cut on four of the shorter arms.



After I set the bevel back to 0°, I set the miter angle to 30° to make the angles on the next four pieces. (The following two three images.)



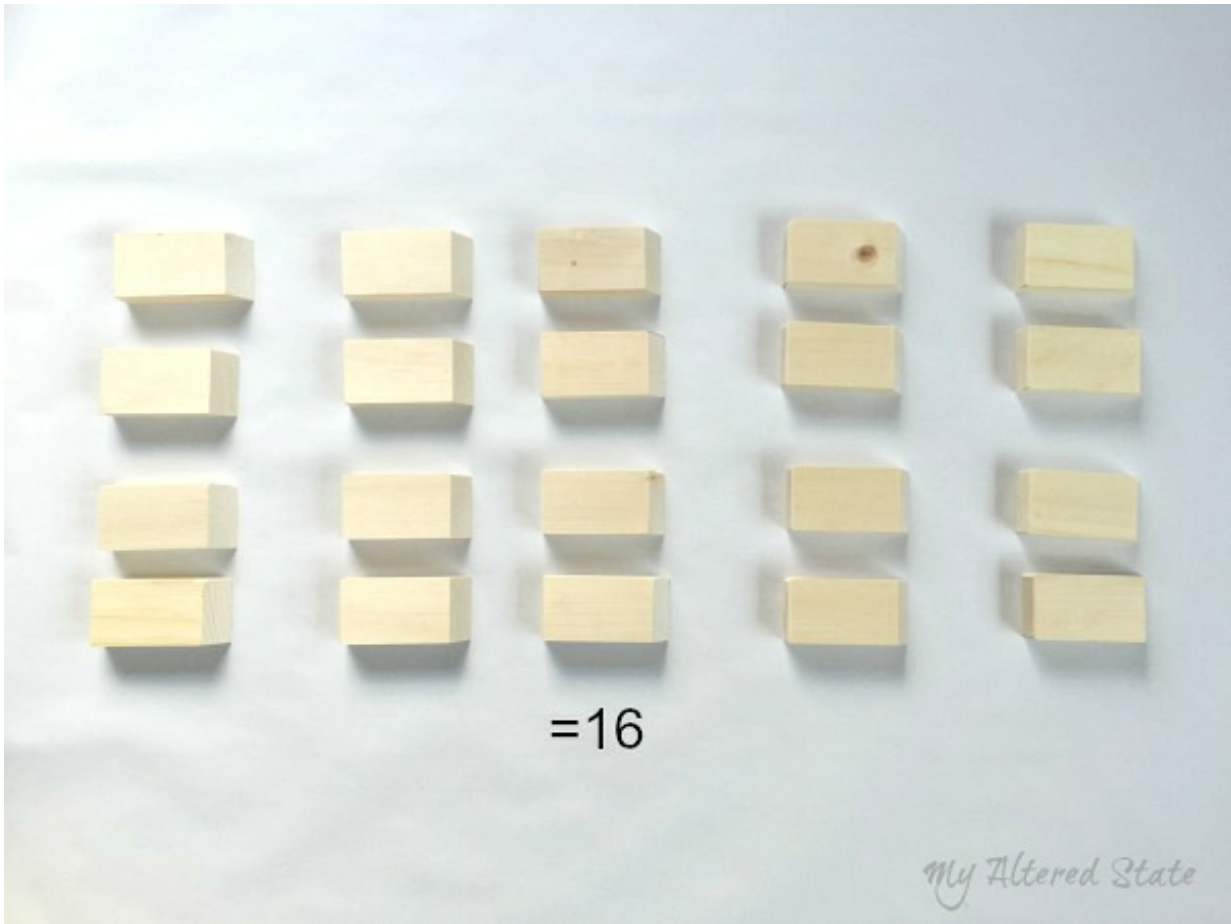


Part 2: Snowflake “tips”.

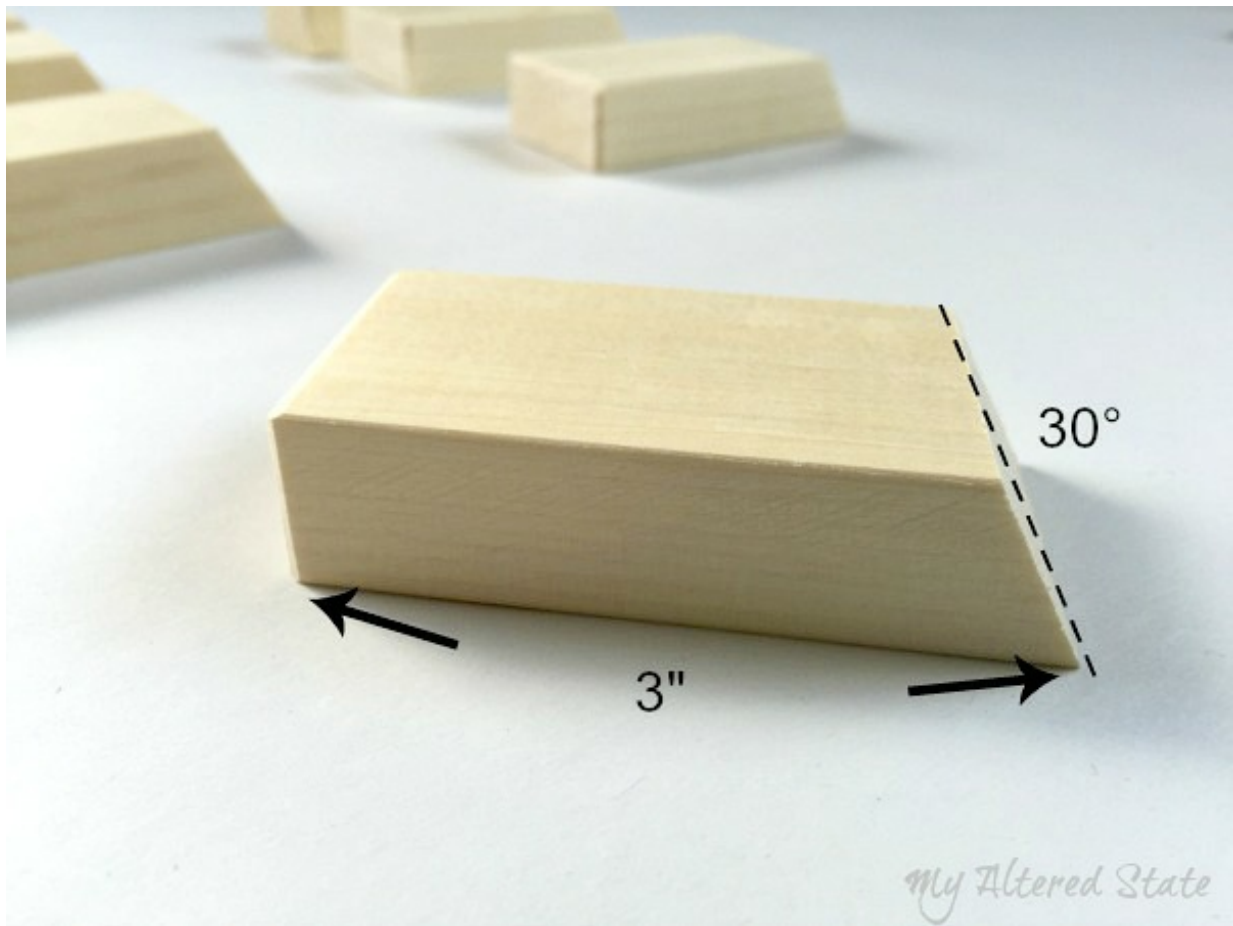
Is there proper terminology for snowflake parts?.. Well, I'm just going to call them tips this time. (I think I've called them “v's” before, but on this weird snowflake, it doesn't really fit... now I'm over thinking it.)

Twenty snowflake tips sounds like a lot. It is. Especially given the fact that there is a beveled end and a squared end on each individual one. Maybe a more efficient design would be just to have both ends beveled, but I wanted those blunt ends.

While I'm on this topic, is something considered beveled if you just flip the board on it's side and cut in with your miter angle adjusted to 30°??? I really want to know. I could go on and talk about semantics. I could also turn to Google and waste 2 hours looking into this. I could also keep typing about it and bug people who may be reading...



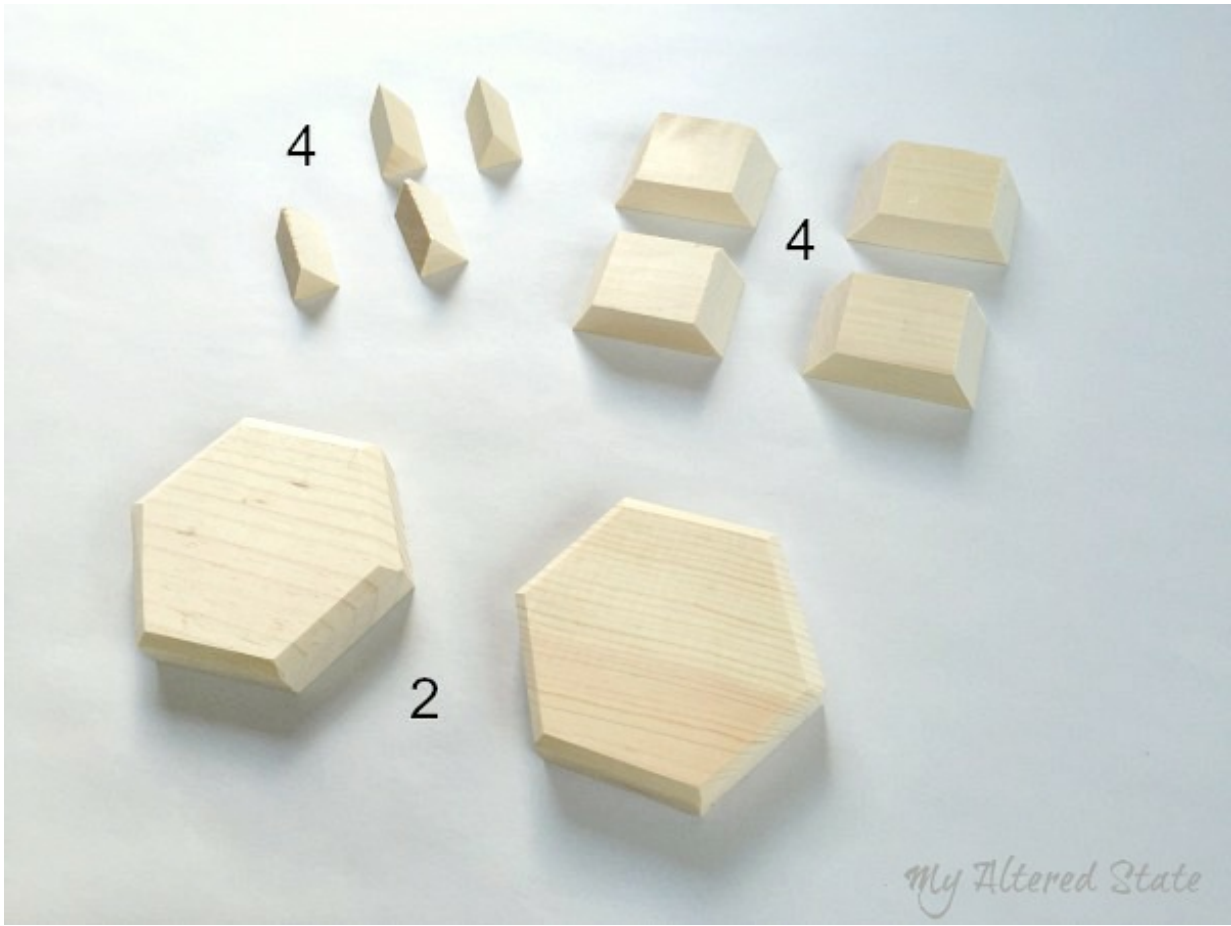
Breakdown of the cuts:



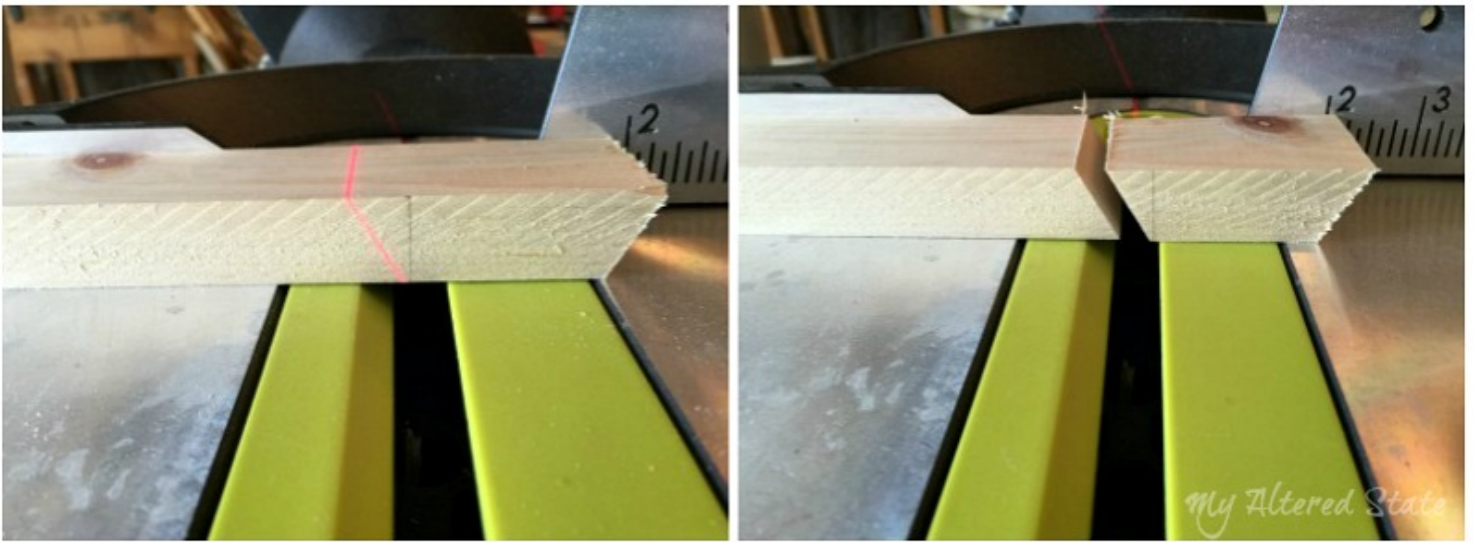
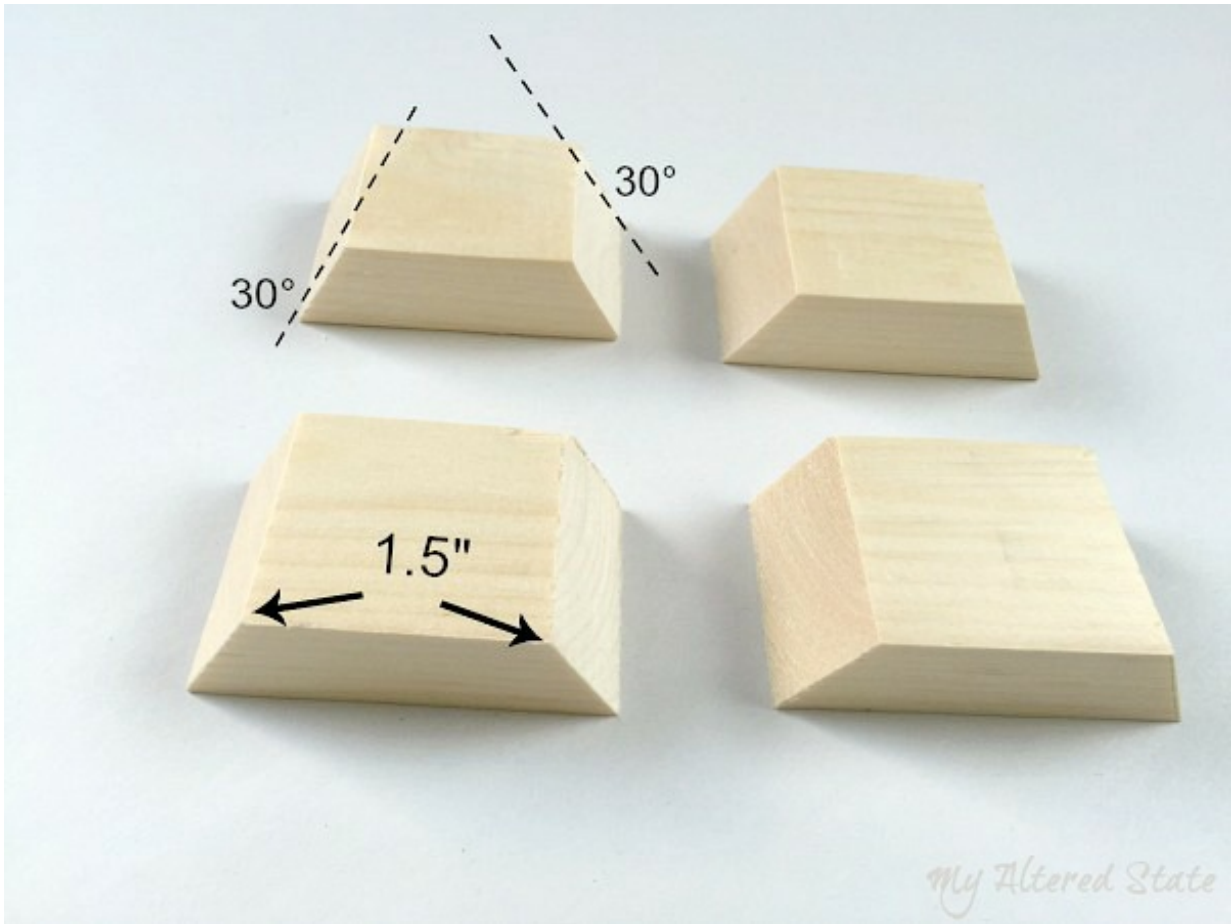
Note: Cut two extra tips. They will act as clamp guides when attaching all the tips to the arms. (Image demonstration below.)

Part 3: Snowflake center.

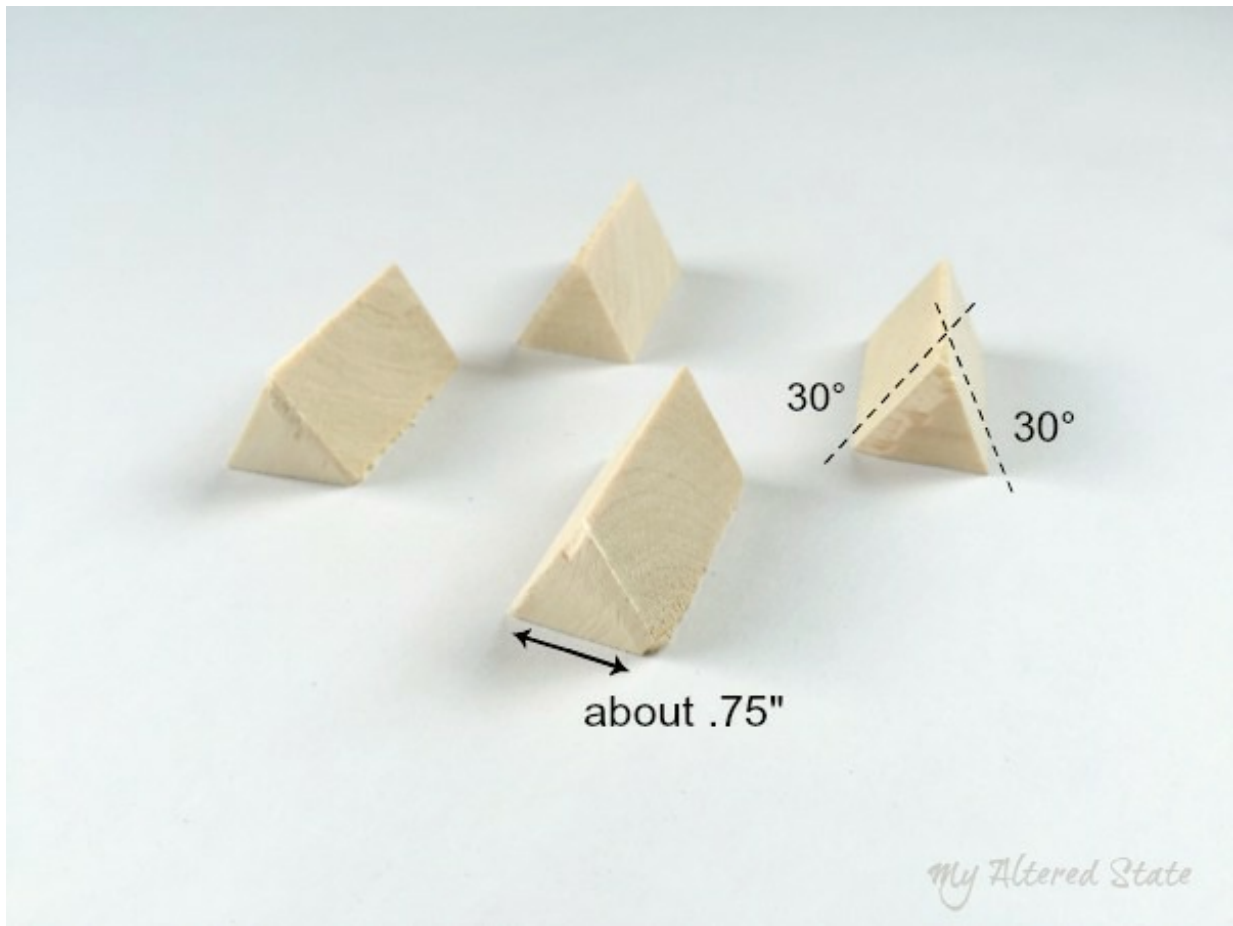
The last grouping of cuts:



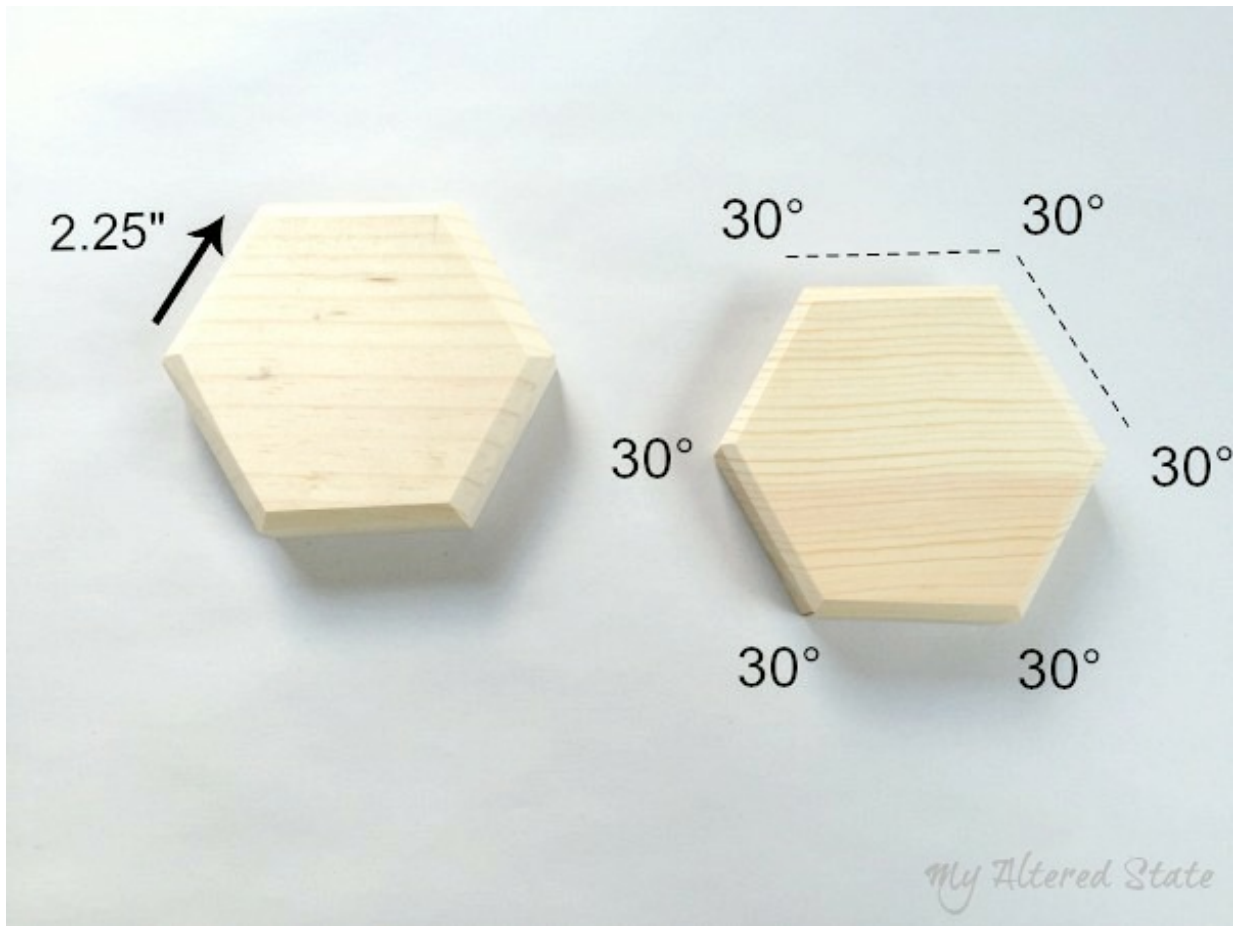
Breakdown of the cuts:



The following tiny pieces were made by flipping over the board and cutting at the opposite angle to make a triangle.



And last, the two hexagons below were made with the miter setting at- you guessed it, 30°. The workpiece is just rotated once after each cut. Detailed instructions on how to cut a hexagon with a miter saw is at the bottom of [THIS POST](#).



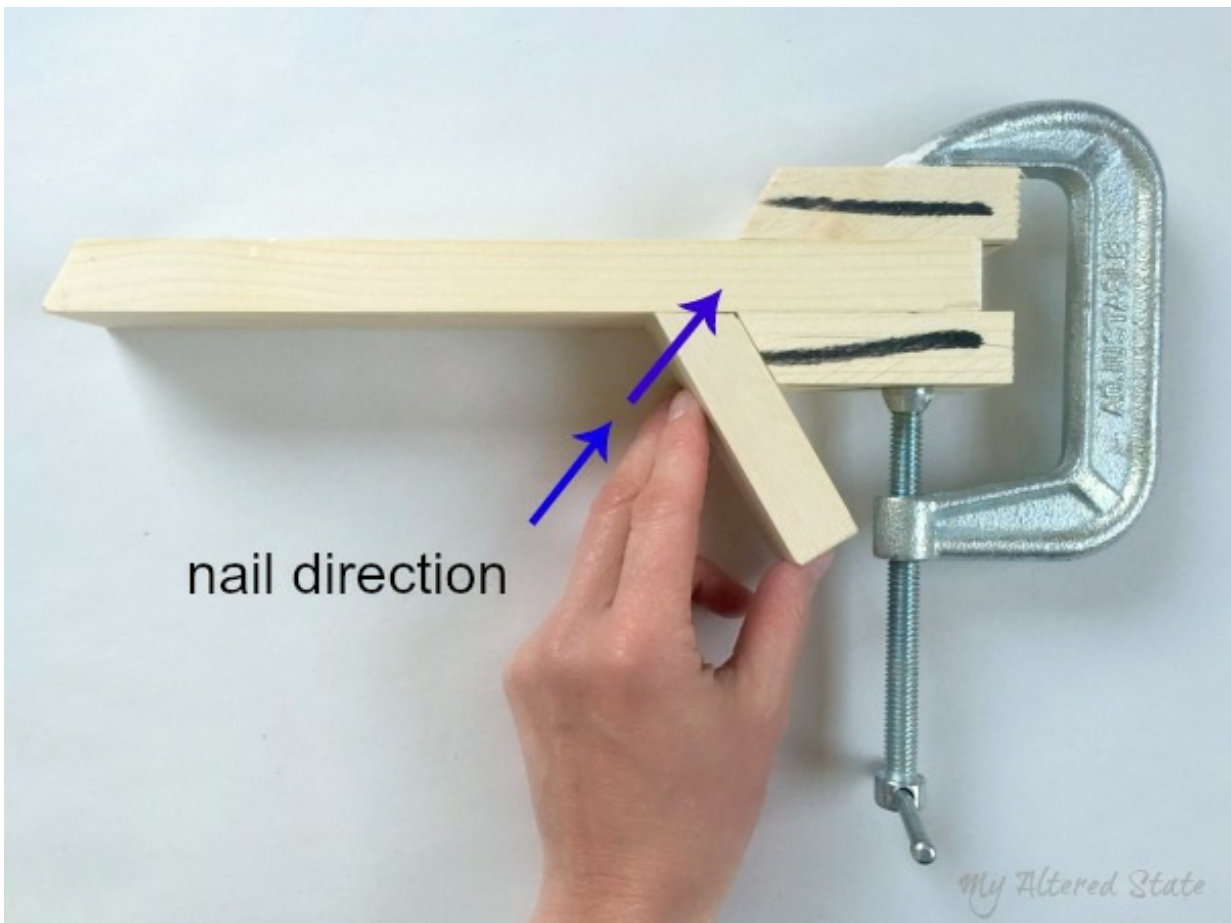
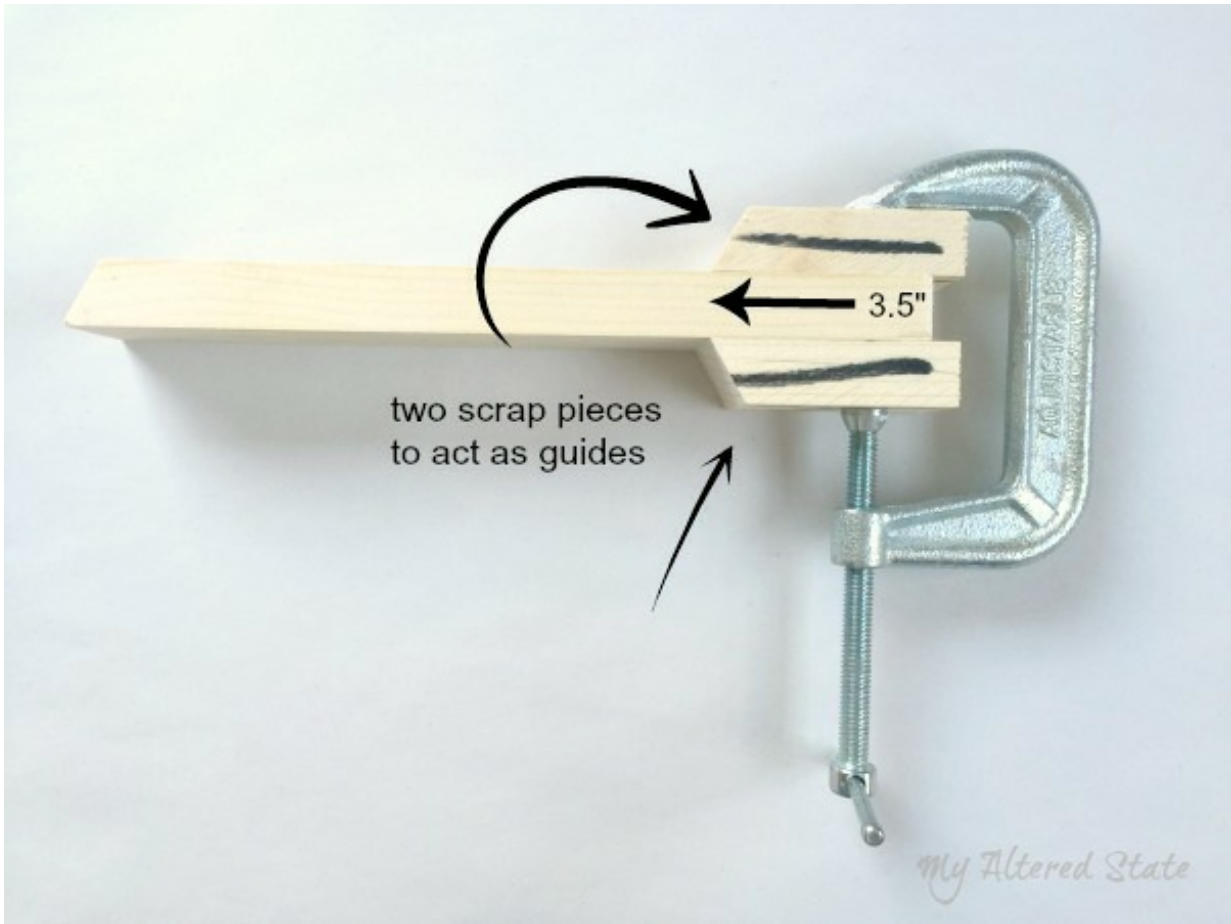
With the cutting done, I ignored my sawdust mess I made, gathered my pieces, and moved the operation to assemble inside. (My family loves it when I do that.)

Snowflake Assembly!

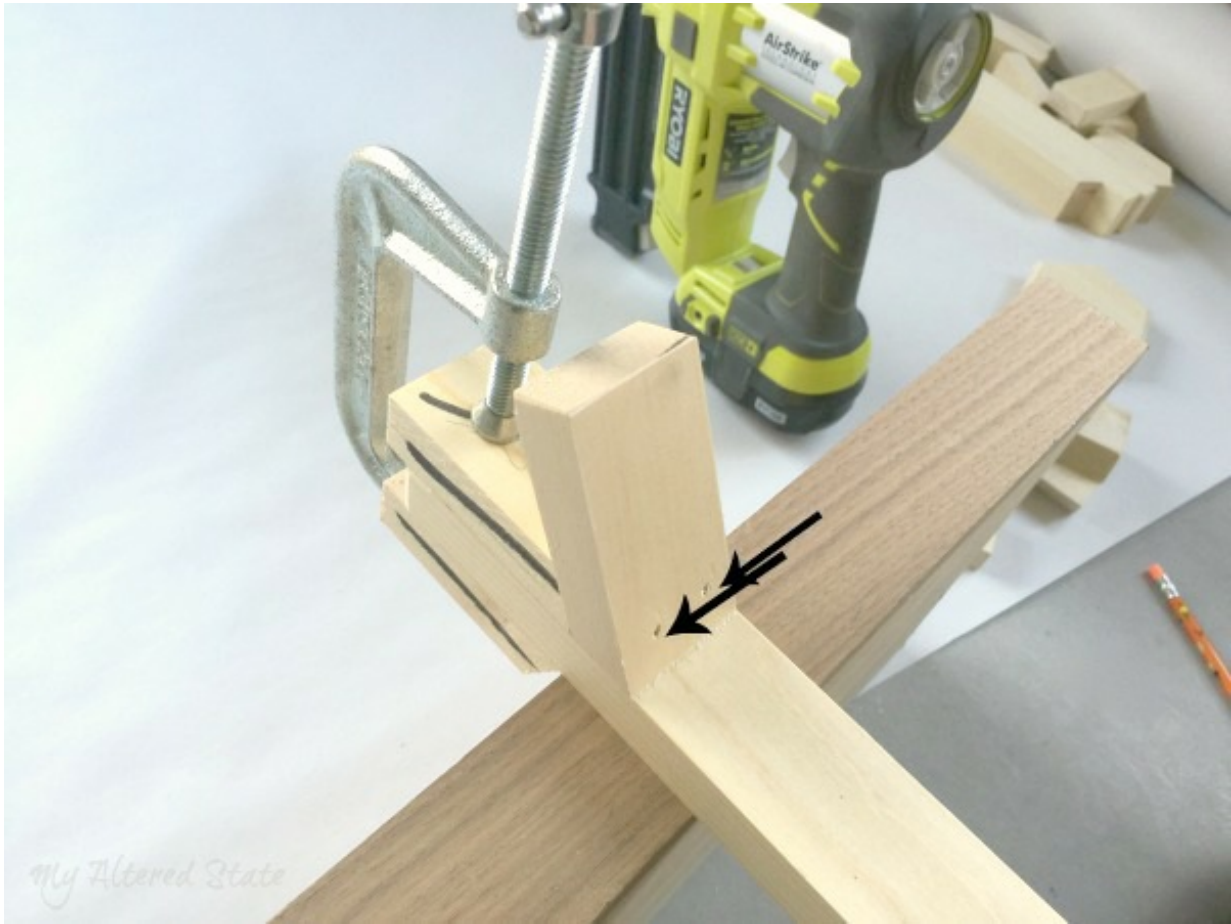
First, I glued/clamped two of the four trapezoid looking thingys to the center of the long arm. (I went ahead and nailed them on for added stability since these pieces act as the core of the snowflake.



Next, I glued/nailed the tips on all of the arms. I used two extra tips as guides by clamping them onto the end of each arm. That gave me something to prop the tips against when I glued/nailed them on. The angle of the nail is important because you don't want to accidentally nail through the guide tips that are clamped on. (I can better describe this in images, therefore, please see the following images.)



(I used something narrow to prop it on while I nailed.)



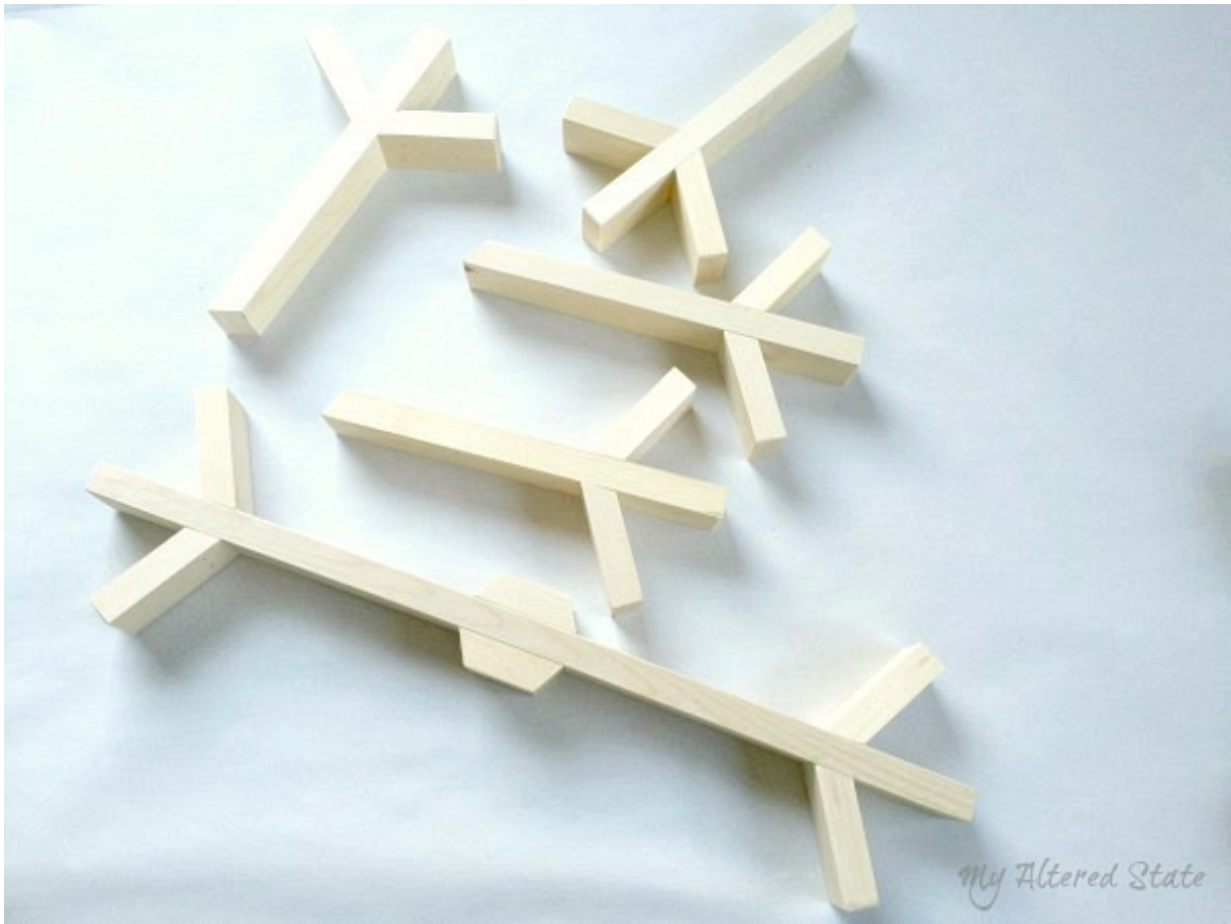
Next, I flipped it over and nailed on the other tip.



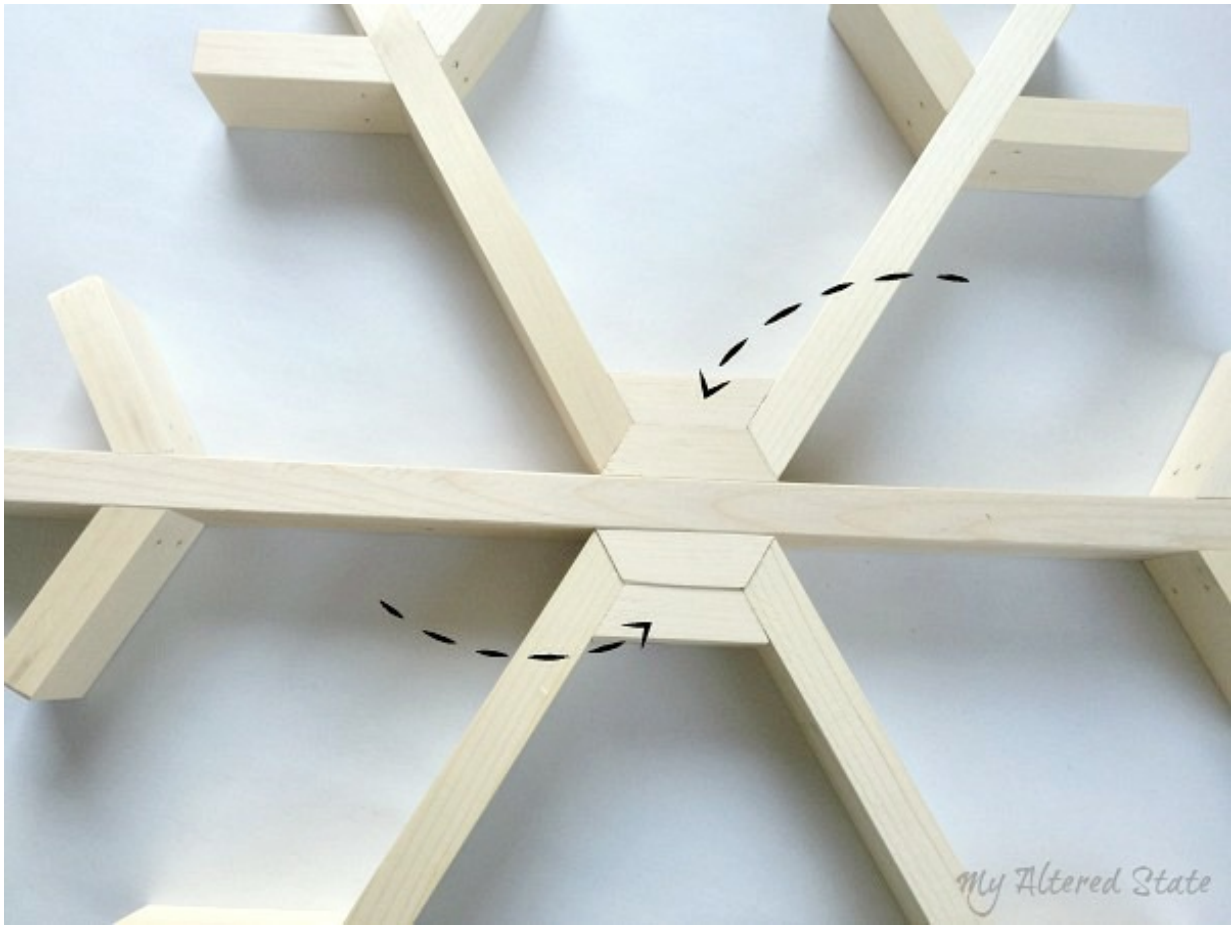
Then I removed the clamp and guides.



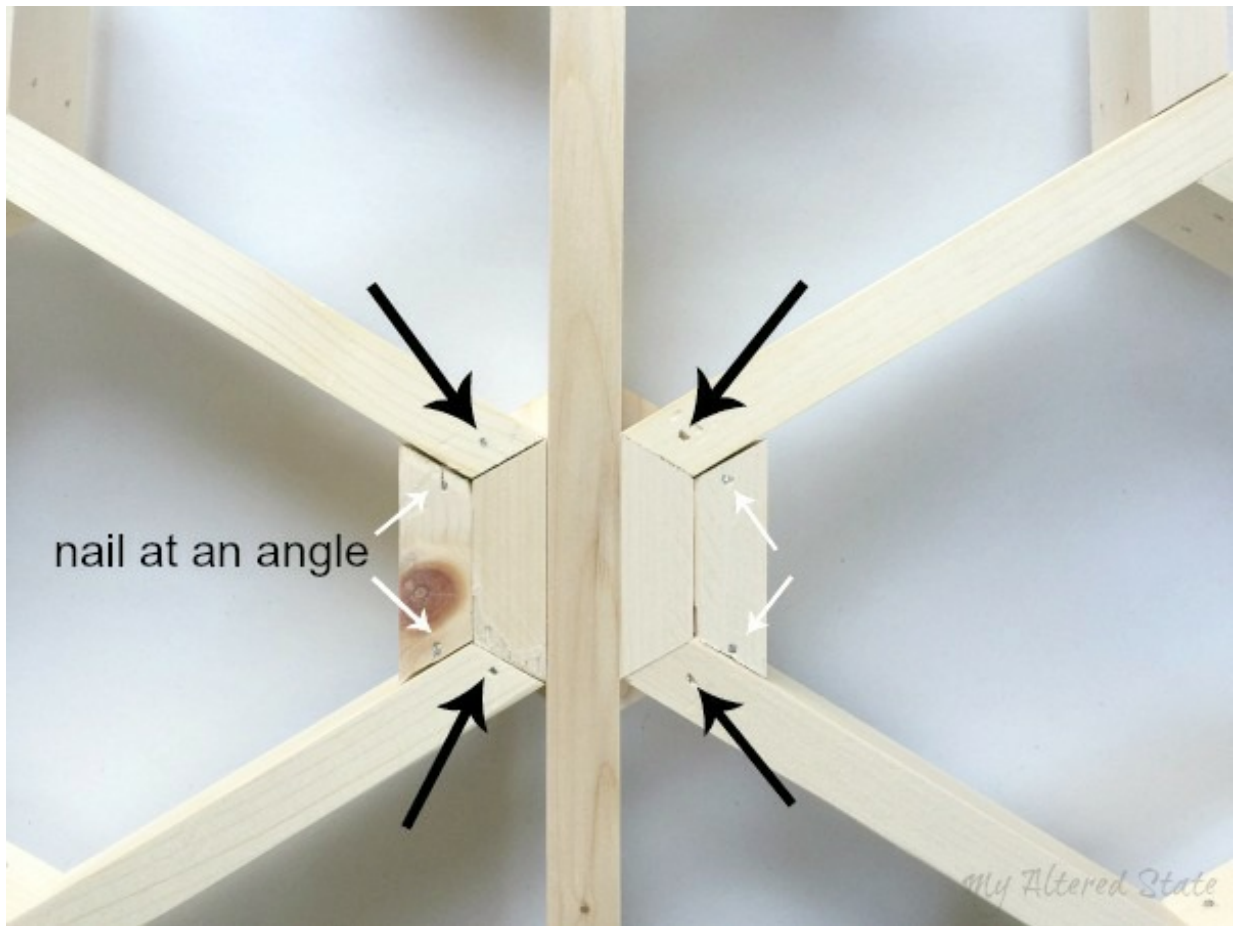
Ta da.



Once all the tips were attached, I laid everything out like so, adding the other two trapezoid pieces (indicated by the arrows in the image below).



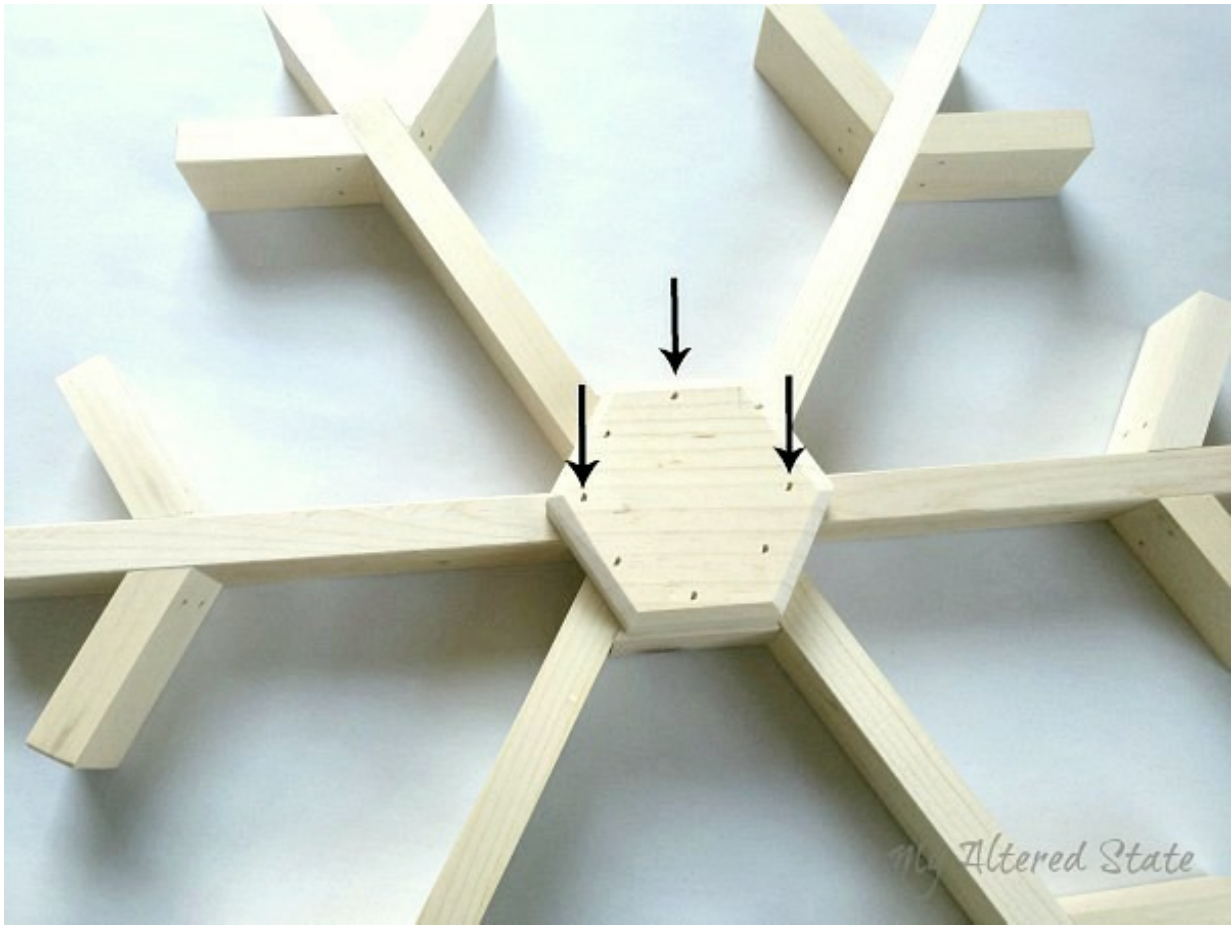
Next I added glue at all the contact points, and nailed them together. (I angled the nails accordingly, indicated by arrow direction in images.)



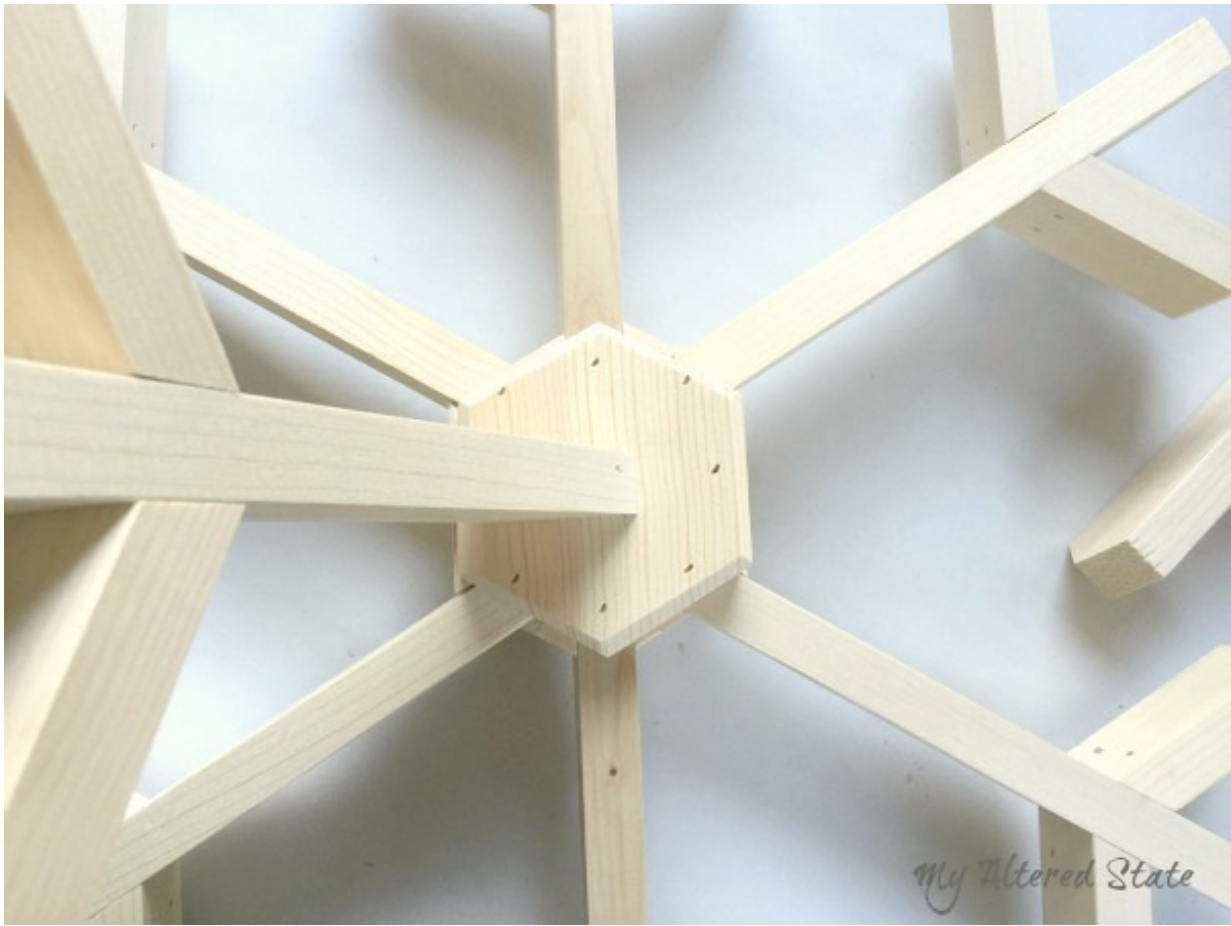
For added stability, I glued and inserted the tiny triangle pieces, wedging them in and holding each one in place for a few minutes.



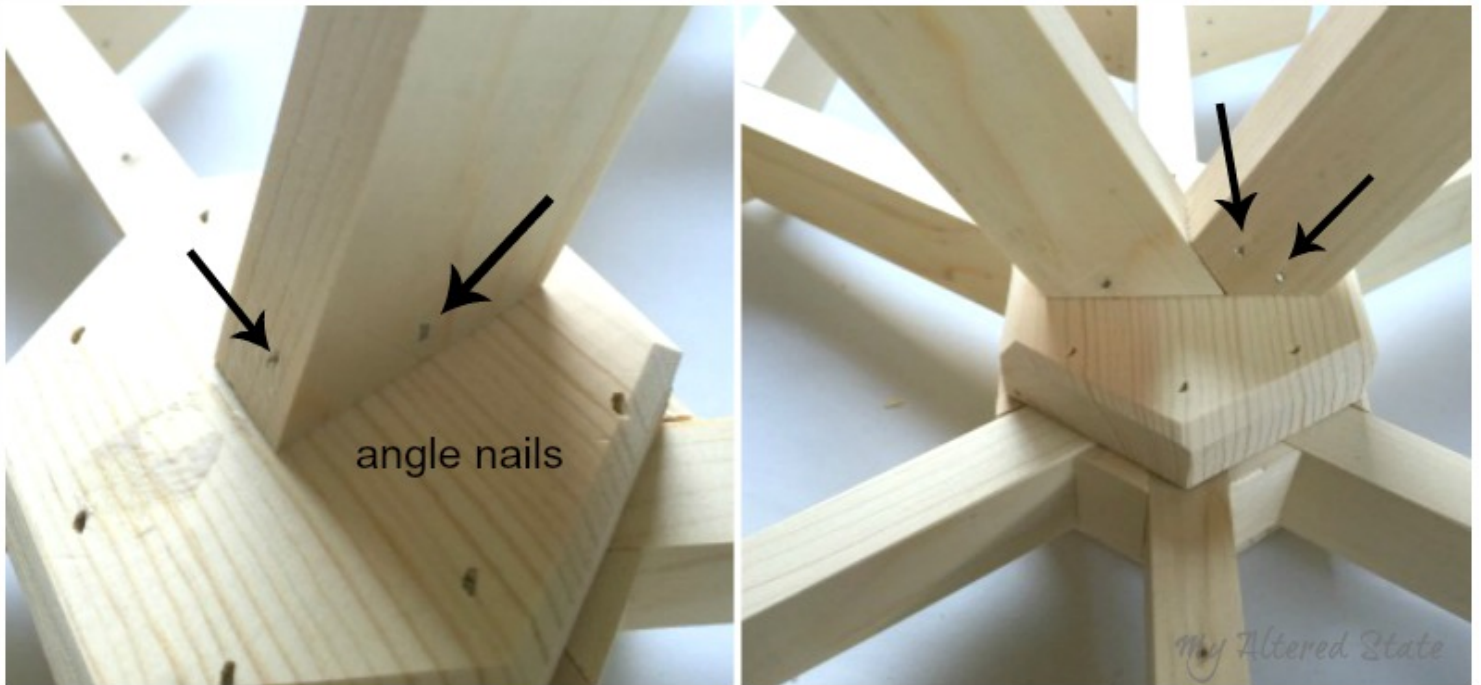
Next, I nailed one of the hexagons in place, being sure to place a nail through each component of the snowflake underneath the hexagon. After that I flipped the whole thing over carefully and repeated previous steps with the nailer, finishing by adding the second hexagon.



The final part of assembling, is to add the other four arms of the snowflake. The first one is centered on the hexagon (see image below).



After adding some glue and nailing the first one onto the hexagon, the second one is attached like so:



The other two arms are nailed onto the hexagon on the reverse side, but at this point, it's necessary to rest the center of the snowflake on a corner of a table to nail them on. (This is because it's impossible to lay the snowflake flat once you attach the arms onto the first side. I'm not gonna lie. It's a little tricky. Another set of hands can be helpful.)

When the snowflake was fully assembled, used my [RYOBI Corner Cat sander](#) to smooth out the joints at the tips. I had to hold the snowflake with one hand, carefully propping the arm ends on a flat surface, and held the sander in with my other hand.



With the dust cleared off the snowflake, I used some caulk to fill the nail holes and seams.



Done.

Finally.

This is when I set down the snowflake, and backed away slowly.



The entire next day I just stared at it from across the room and wondered why the heck I didn't paint the two long boards white before I started any cutting.

is anyone still reading this?...

because that was long.