

A large photograph of a backyard patio at dusk. A wooden pergola with string lights covers the area. In the center is a fire pit with a fire. There are several patio chairs and a sofa. In the background, a house with large windows is visible. On the right side, there are some papers or blueprints with diagrams and text, including the heading 'Solid Brackets for Rafter Lighting'.

Build Your Dream *Backyard* One Project at a Time



14' x 12' Gazebo with Hip Roof

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Gazebo Leg	6 x 6 Lumber x 8ft long	4
2	Front Stringer	2 x 12 Lumber x 162" Long	2
3	Side Stringer	2 x 12 Lumber x 138" Long	2
4	Front Inside Stringer	2 x 12 Lumber x 148" Long	2
5	Side Inside Stringer	2 x 12 Lumber x 127" Long	2
6	Brace 001	2 x 6 x 48" Long	8
7	Roof Stringer	2 x 8 Lumber x 72" Long	2
8	Rafter 01	2 x 6 Lumber x 87-3/16" Long	8
9	Side Rafter Support	2 x 4 Lumber x 7-1/4" Long	2
10	Rafter 02	2 x 6 Lumber x 64-3/8" Long	2
11	Rafter 03	2 x 6 Lumber x 99-3/4" Long	4
12	Rafter 04	2 x 6 Lumber x 46-13/16" Long	4
13	Rafter 05	2 x 6 Lumber x 27-13/16" Long	4
14	Rafter 06	2 x 6 Lumber x 48-7/16" Long	4
15	Front Roof Trim	2 x 6 Lumber x 175-5/8" Long	2
16	Side Roof Trim	2 x 6 Lumber x 157" Long	2
17	RHSNBOLT 0.5-13x8x8-N	1/2" x 8" Carriage Bolt	16
18	Regular FW 0.5	1/2" Hex Nut	16
19	HNUT 0.5-13-D-N	1/2" Hex Nut	16

Raw Materials Needed	
DESCRIPTION	QTY.
6 x 6 x 8ft Long	4 pcs
2 x 12 x 14ft Long	4 pcs
2 x 12 x 12ft Long	4 pcs
2 x 6 x 16ft Long	2 pcs
2 x 6 x 14ft Long	2 pcs
2 x 6 x 12ft Long	1 pc
2 x 6 x 10ft Long	4 pcs
2 x 6 x 8ft Long	20 pcs
2 x 8 x 8ft Long	2 pcs
2 x 8 x 8ft Long	1 pc
7/16"x4'x8' OSB Sheathing	8 Sheets
7/16"x4'x10' OSB Sheathing	1 Sheet
1/2" x 8" Carriage Bolts	16 pcs
1/2" Flat Washers	16 pcs
1/2" Flange Nuts	16 pcs
# 9 x 3" Exterior Screws	15 lbs
# 6 x 2" Exterior Screws	5 lbs
Drip Edge	65 ft
Roofing Underlayment	1 Roll
Shingles	220 sq. ft
1-1/4" Roofing Nails	10 lbs

Step 1 - Cut Gazebo Parts

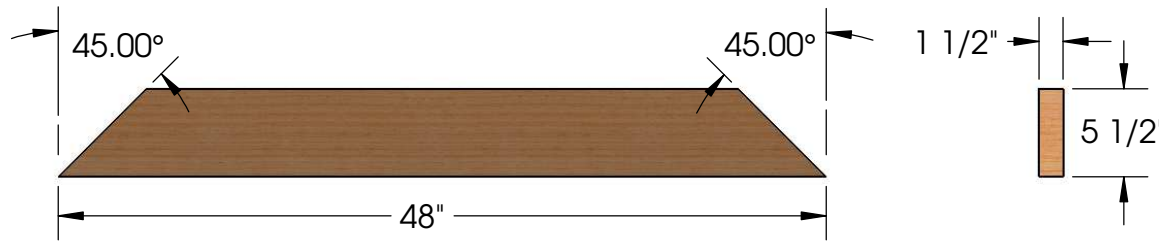
- The 8' 6 x 6's do not need to be cut (Item #1)
- Cut two of the 14' 2 x 12's down to 162" (Item #2)
- Cut two of the 12' 2 x 12's down to 138" (Item #3)
- Cut two of the 14' 2 x 12's down to 148" (Item #4)
- Cut two of the 12' 2 x 12's down to 127" (Item #5)
- See detail #6 on Page 2 for instructions for cutting Item #6
- Cut the 12ft 2 x 8 into two pcs 72" Long (Item #7)
- See Details 8 & 9 on Page 2 for instructions on cutting Items #8 & 9
- See detail #10-12 on Page 3 for instructions for cutting Item #10-12
- See detail #13 & 14 on Page 4 for instructions for cutting Items #13 & 14
- Cut the two 16' 2 x 6's down to 175-5/8" (Item #15)
- Cut two of the 16' 2 x 6's down to 157" (Item #16)



Step 1 cont. - Cut Boards to Length

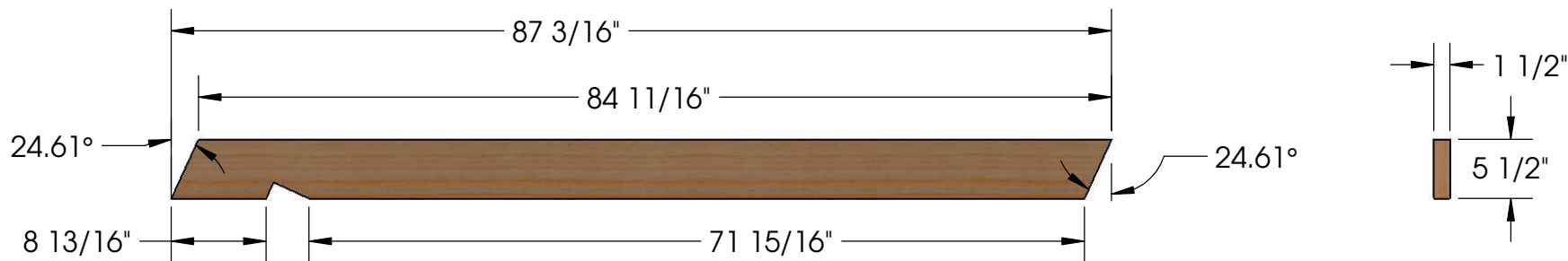
Item No. 6 Material: 2 x 6 Lumber x 48" Long
Qty.: 8

Using four of the 8ft 2 x 6's cut two pcs 48" long with a 45° angle on each end out of each one (Item # 6) for a total of eight pcs.



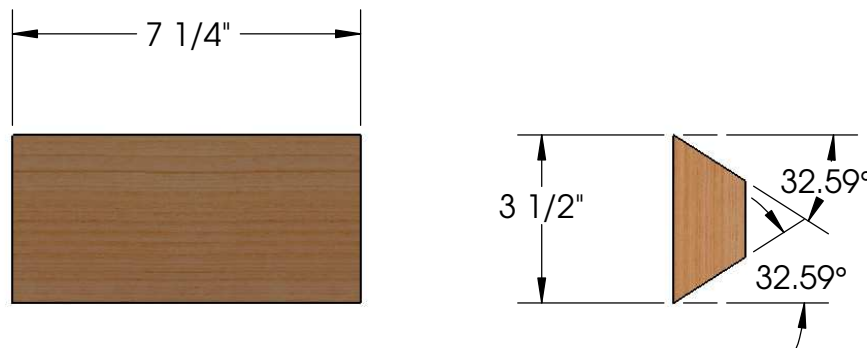
Item No. 8 Material: 2 x 6 Lumber x 87-3/16" Long
Qty.: 10

Using ten of the 8ft 2 x 6's cut one pc 87-3/16" long with a 24.6° angle on each end as shown below (Item # 25) for a total of ten pcs. Then cut a bird's mouth notch out of the bottom of each one as shown below. See Attachment 002 at the end of these plans for a cutting template for the bird's mouth.



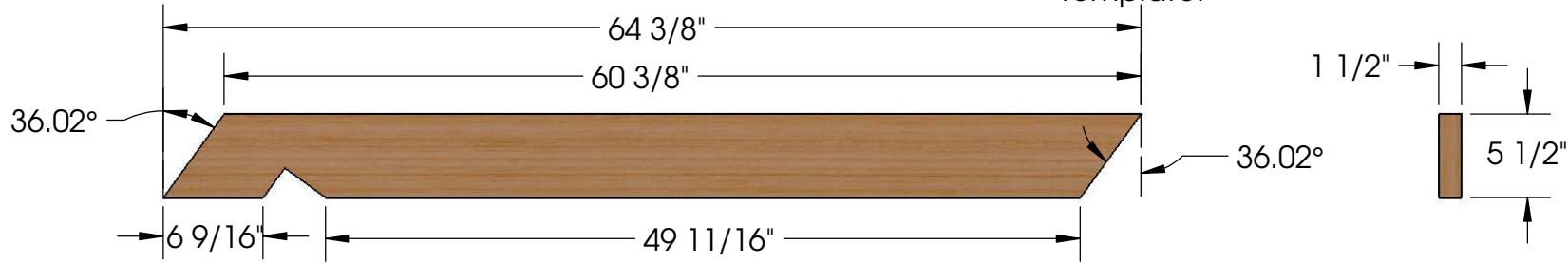
Item No. 9 Material: 2 x 4 Lumber x 7-1/4" Long
Qty.: 2

Using the 8ft 2 x 4 cut two pcs 7-1/4" long and then cut a 32.6° chamfer on each side as shown below.



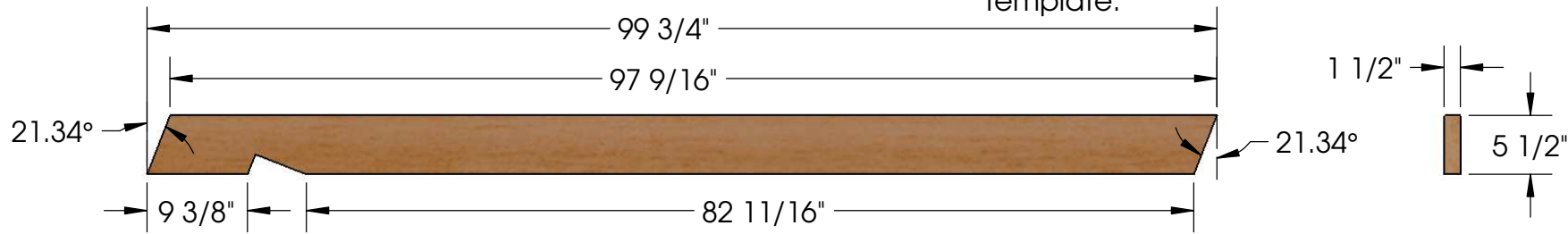
Item No. 10 Material: 2 x 6 Lumber x 120" Long
Qty.: 2

Using one of the 12ft 2 x 6's cut two pcs 64-3/8" long with a 36° angle on each end (Item # 10) as shown below. Then cut a bird's mouth in the bottom side as shown below. See Attachment 003 at the end of these plans for a cutting template.



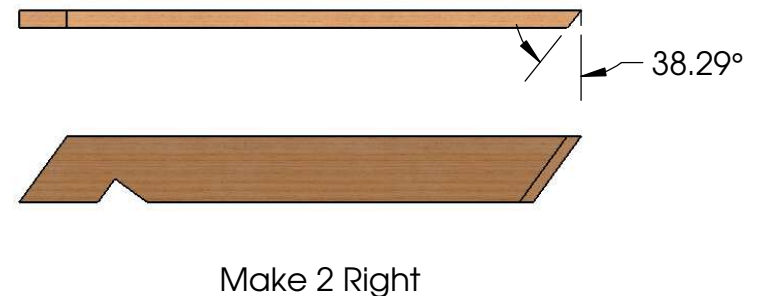
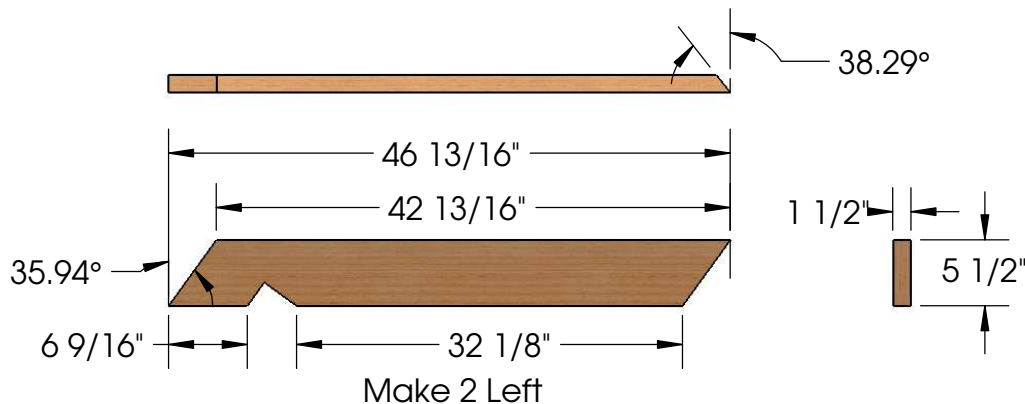
Item No. 11 Material: 2 x 6 Lumber x 99-3/4" Long
Qty.: 4

Using four of the 10ft 2 x 6's cut four pcs 99-3/4" long with a 21° angle on each end (Item # 11) as shown below. Then cut a bird's mouth in the bottom side as shown below. See Attachment 004 at the end of these plans for a cutting template.



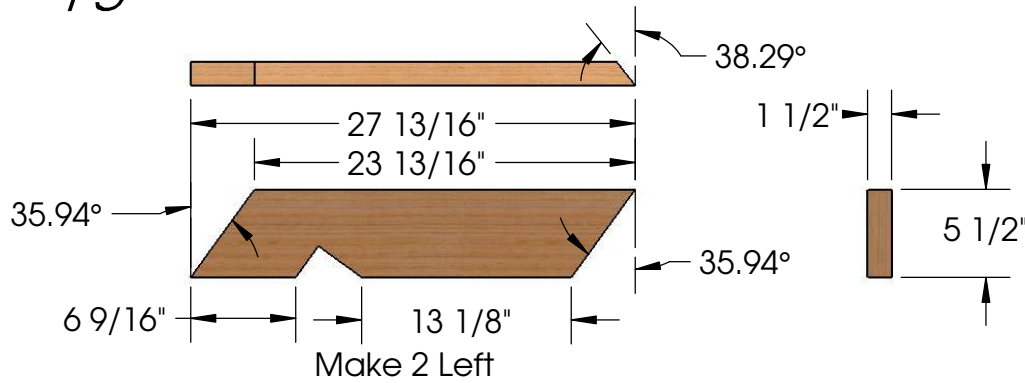
Item No. 12 Material: 2 x 4 Lumber x 46-13/16" Long
Qty.: 4 (2 Left & 2 Right)

Using two of the 8ft 2 x 6's cut two pcs 46-13/16" long out of each one with a 36° angle on each end (Item # 12) as shown below for a total of four pcs. Then cut a bird's mouth in the bottom side as shown below. See Attachment 003 at the end of these plans for a cutting template for the bird's mouth. The top angle must then be trimmed off at a 28° angle on one side as shown, two pcs should be trimmed on the left side and two on the right. See illustrations below.

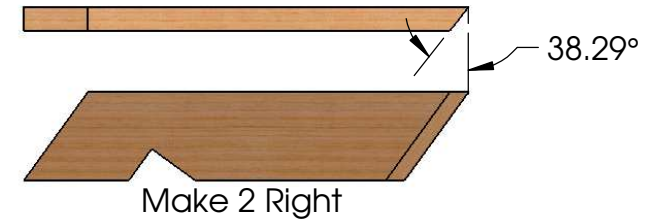


Step 1 cont. - Cut Boards to Length

Item No. 13 Material: 2 x 6 Lumber x 27-13/16" Long Qty.:4

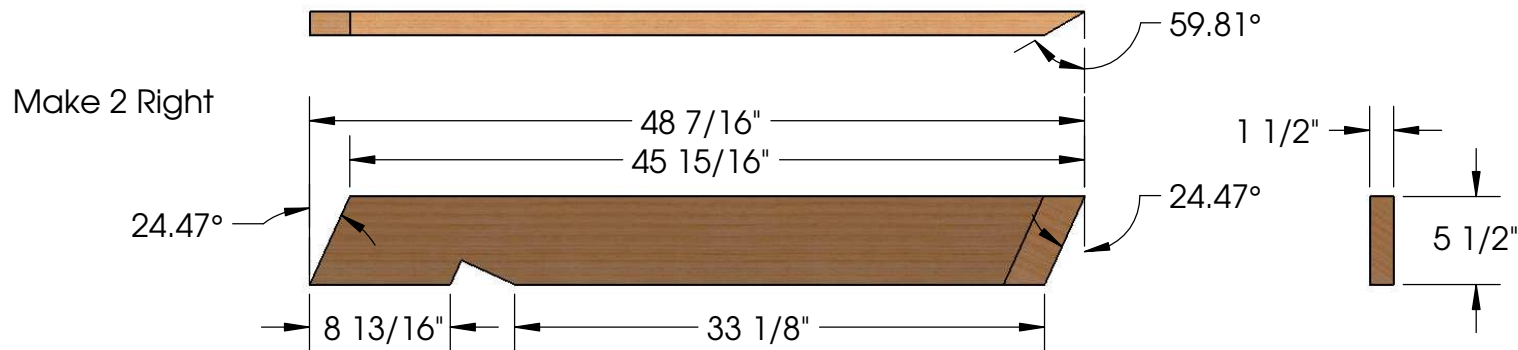


Using one of the 10ft 2 x 6's cut four pcs 27-13/16" long with a 36° angle on each end (Item # 13) as shown below. Then cut a bird's mouth in the bottom side as shown below. See Attachment 003 at the end of these plans for a cutting template for the bird's mouth. The top angle must then be trimmed off at a 38° angle on one side as shown, two pcs should be trimmed on the left side and two on the right. See illustrations below.



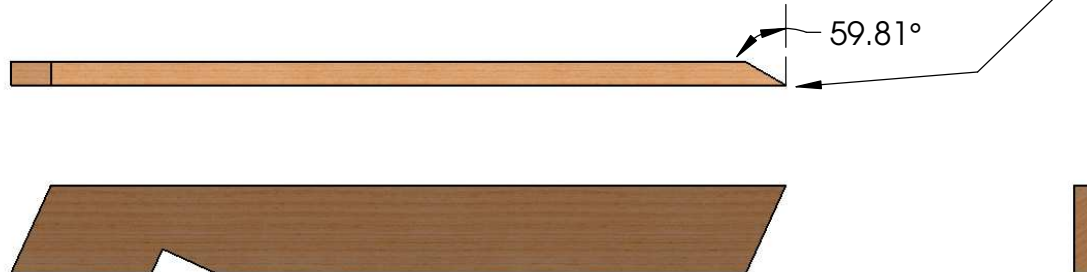
Item No. 14 Material: 2 x 6 Lumber x 48-7/16" Long Qty.:4 (2 Left and 2 Right)

Using two of the 8ft 2 x 6's cut four pcs 48-7/16" long with a 24.5° angle on each end (Item # 14) as shown below. Then cut a bird's mouth in the bottom side as shown below. See Attachment 002 at the end of these plans for a cutting template for the bird's mouth. The top angle must then be trimmed off at a 60° angle on one side as shown, two pcs should be trimmed on the left side and two on the right. See illustrations below.



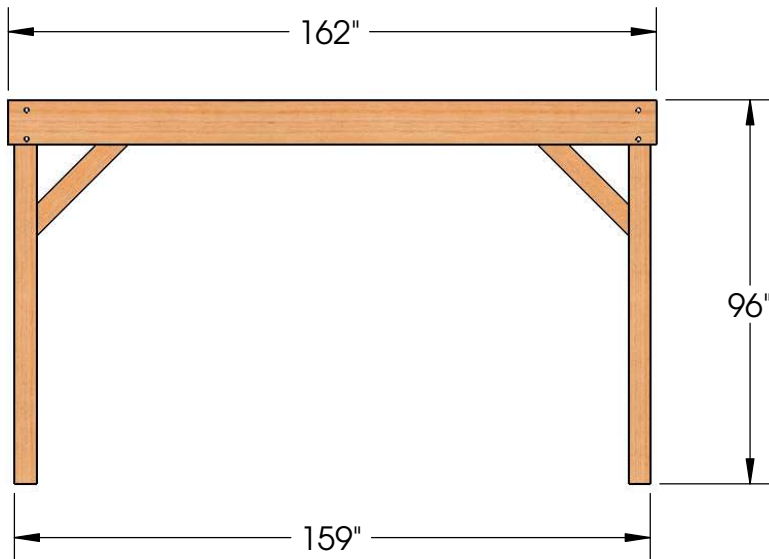
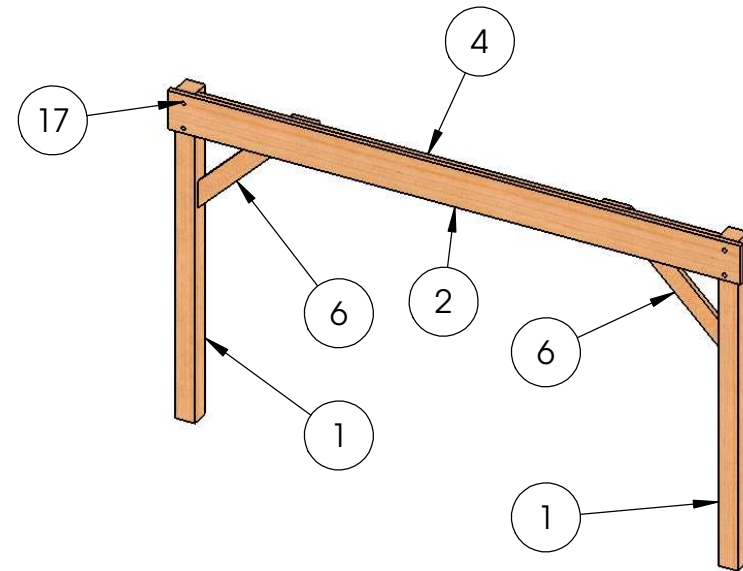
Identical to the one above except for the compound angle is on the opposite side

Make 2 Left

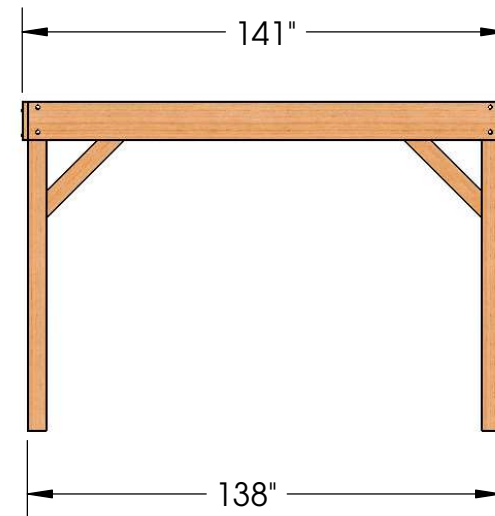
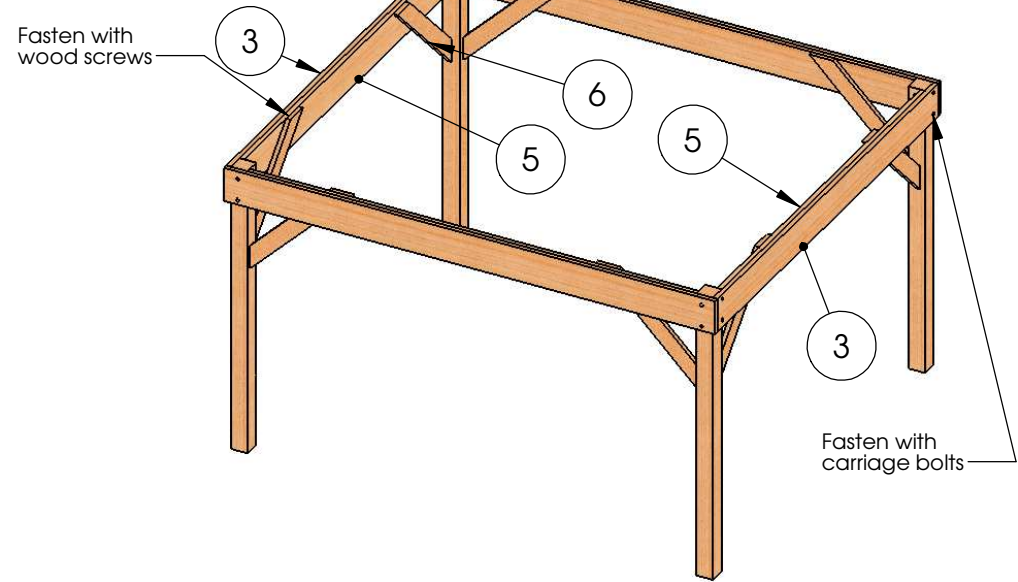
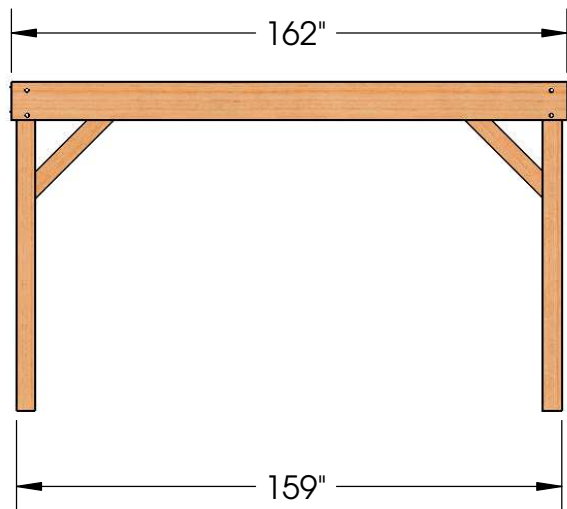
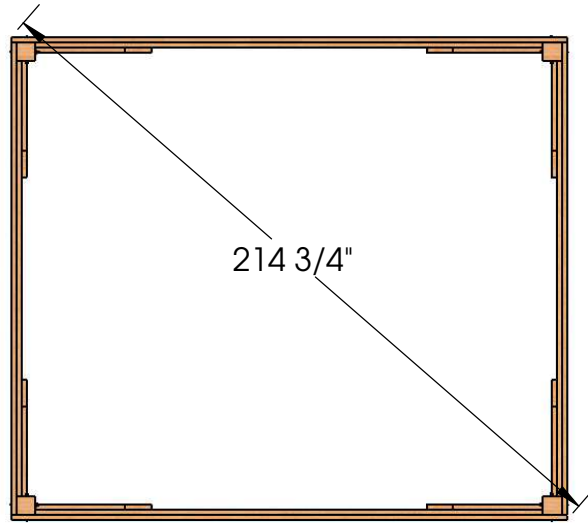


Step 2 - Assemble Gazebo Base

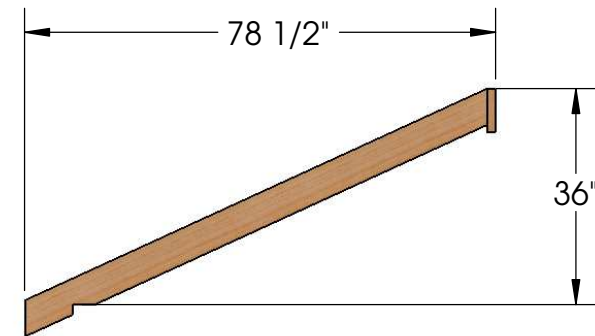
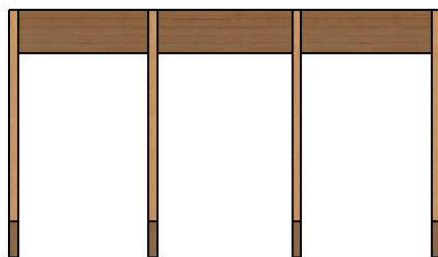
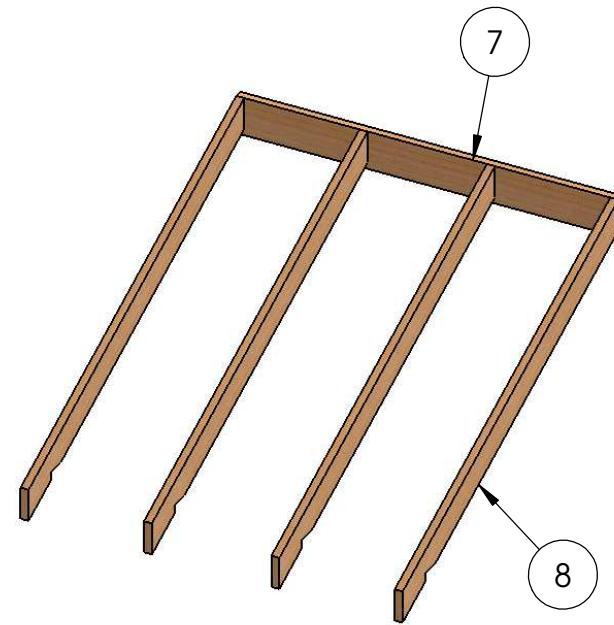
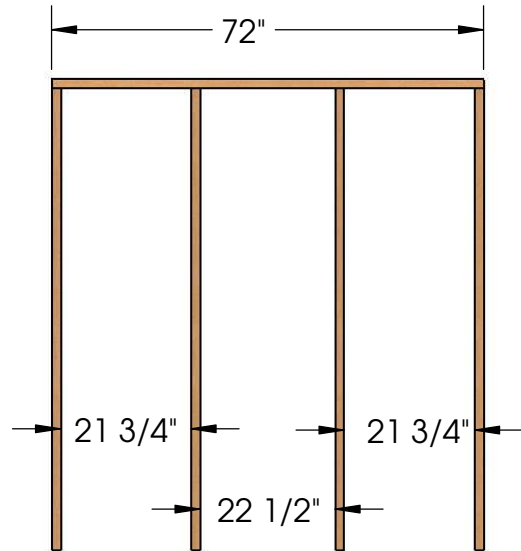
Lay out the Gazebo Base as shown below with the 162" 2 x 12 stringers (Item #2) on the front side and drill two 1/2" holes through the stringer and the leg at each end. Be sure that the legs are square and fastne with carriage bolts with nuts and washers. Then position the 148" 2 x 12 inside stringer (Item #4) in between the legs. Make sure that the boards are flush on the top and fasten together using 2" wood screws. Measure from corner to corner to be sure that the frame is square. Finally install the corner braces (Item #6) in each corner as shown. Secure using 3" wood screws. Build two of these.

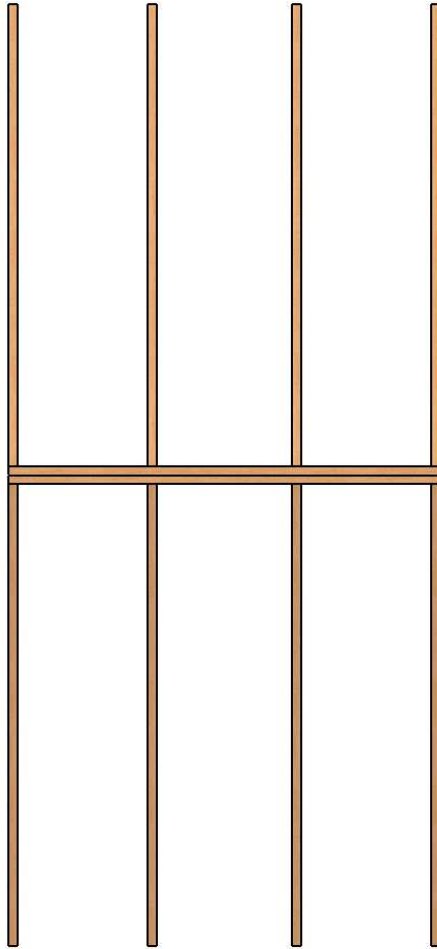


Stand up the leg assemblies as shown below. Then install the side stringers (Item # 3) in between the legs and secure by drilling two more 1/2" holes through each leg and fastening with carriage bolts with nuts and washers, be sure to drill your holes at a different height than the front holes so that your bolts don't hit each other. Next install the inside side stringers (Item #5) between the legs as shown, fasten with 2" wood screws. Finally insall corner braces on the sides of the frame the same way you did the front ones. See illustration below.

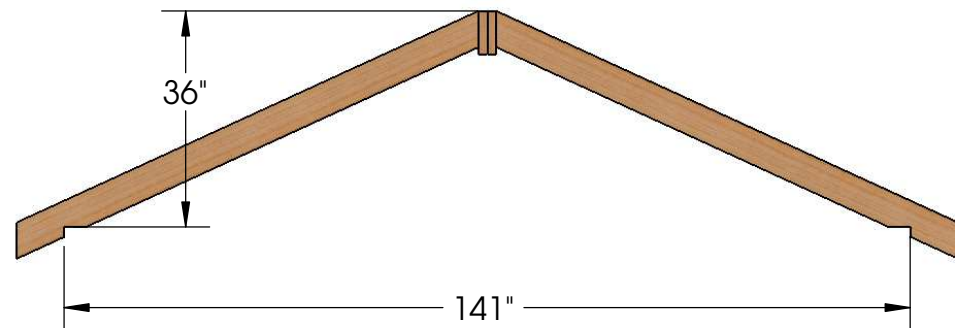
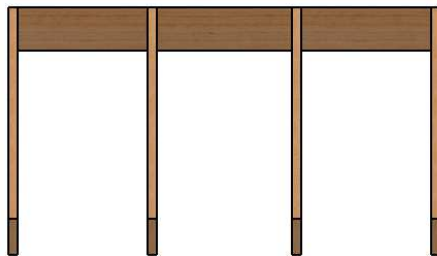


Fasten five of Rafter 001 (Item #8) to one of the roof stringers (Item #7) as shown below using 3" wood screws through the stringer into each rafter. Make two of these.

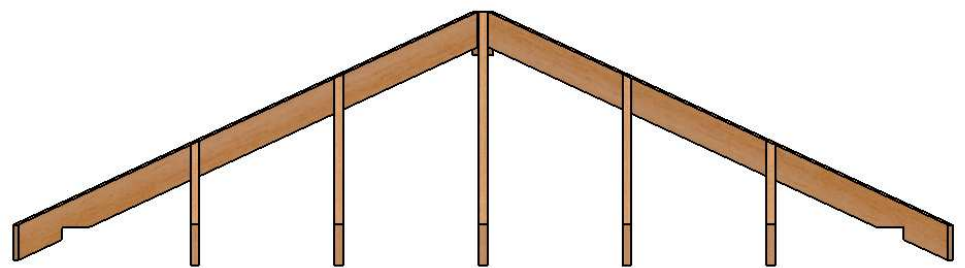
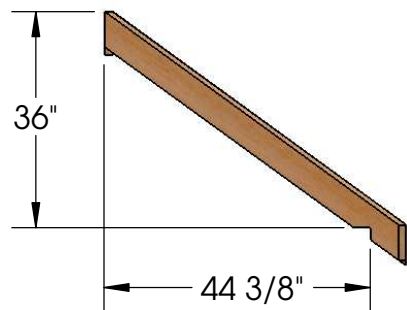
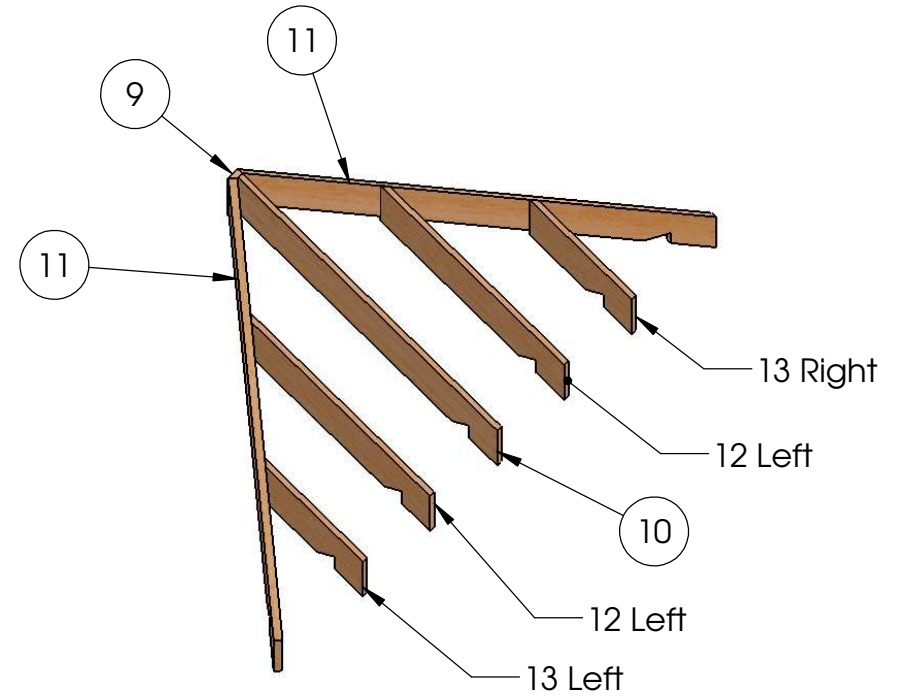
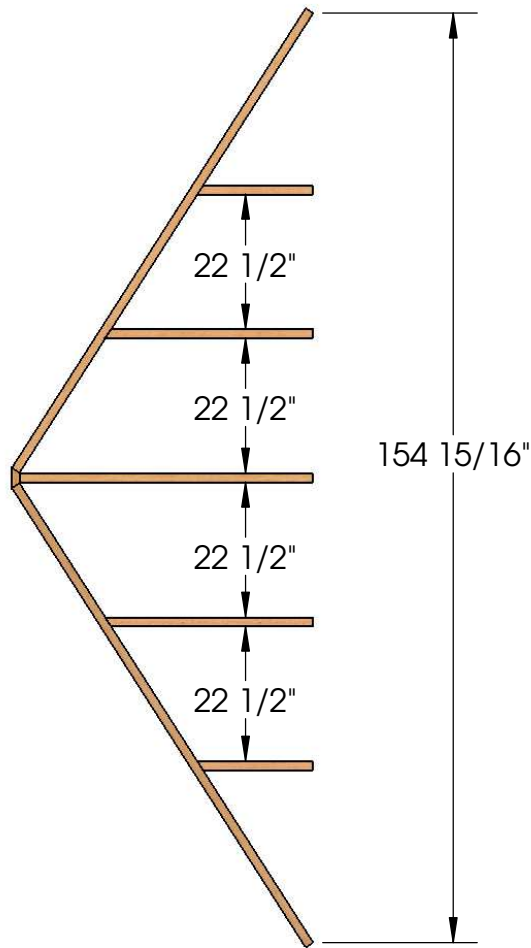




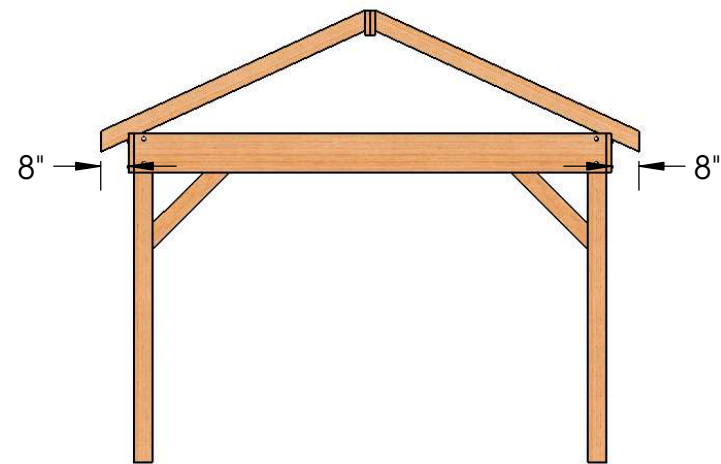
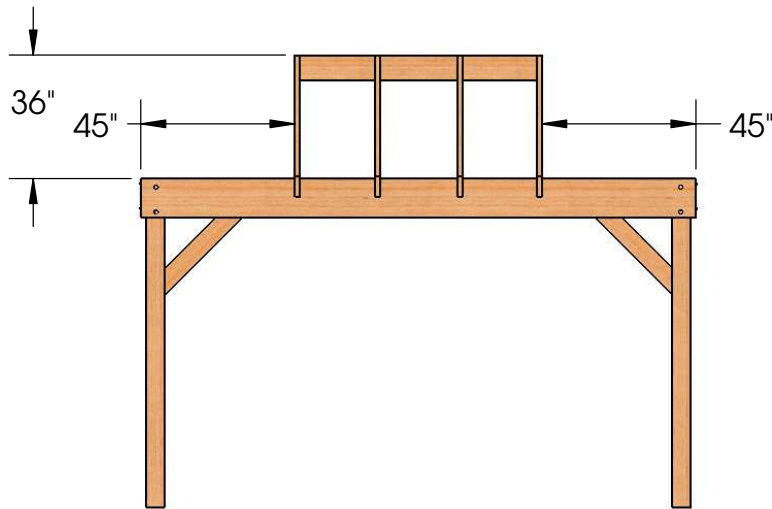
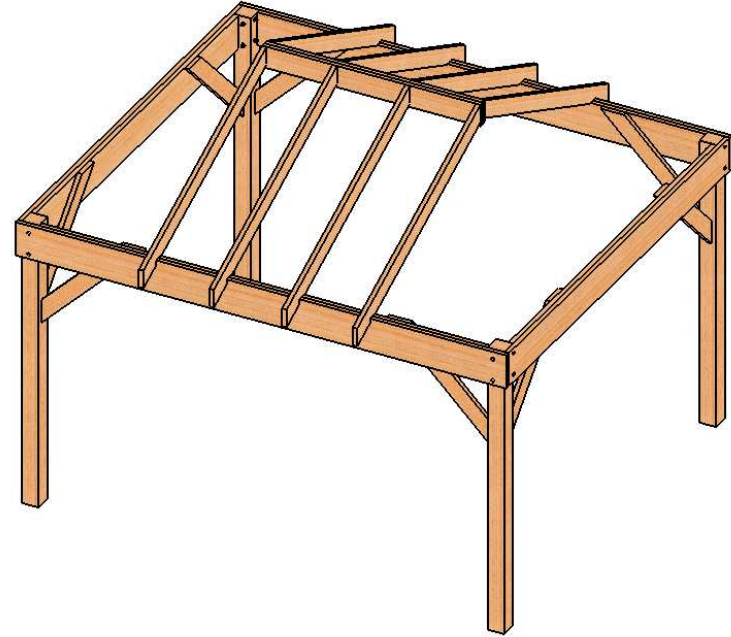
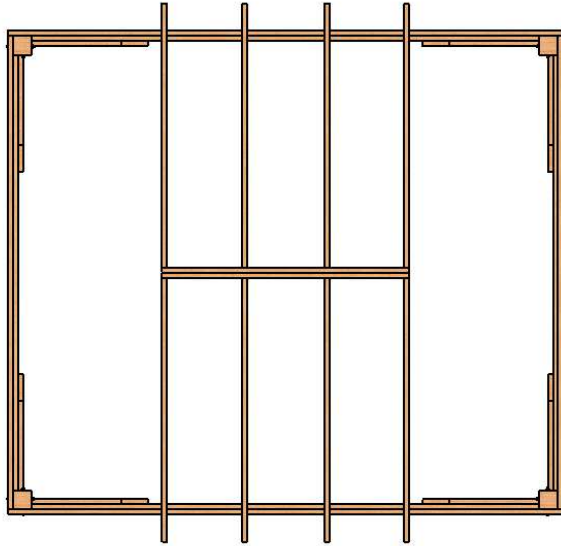
Clamp the two rafter assemblies that you made together and use 3" wood screws to fasten them together.



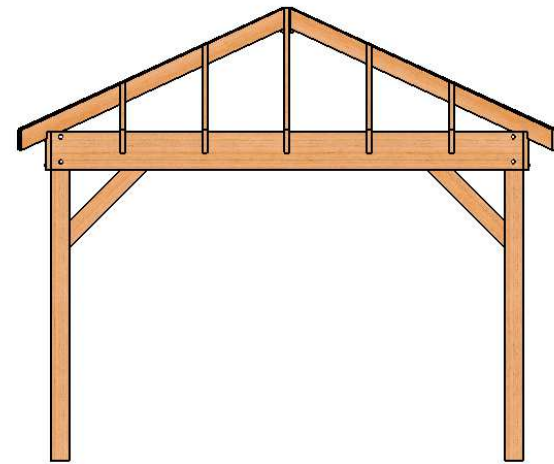
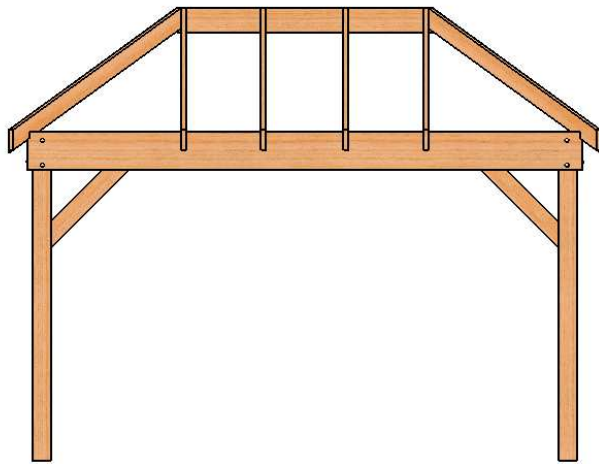
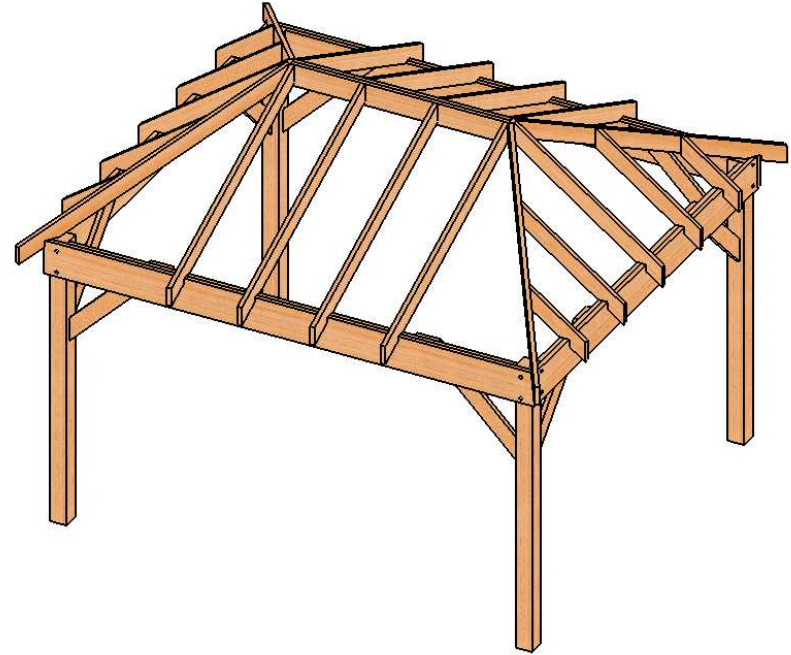
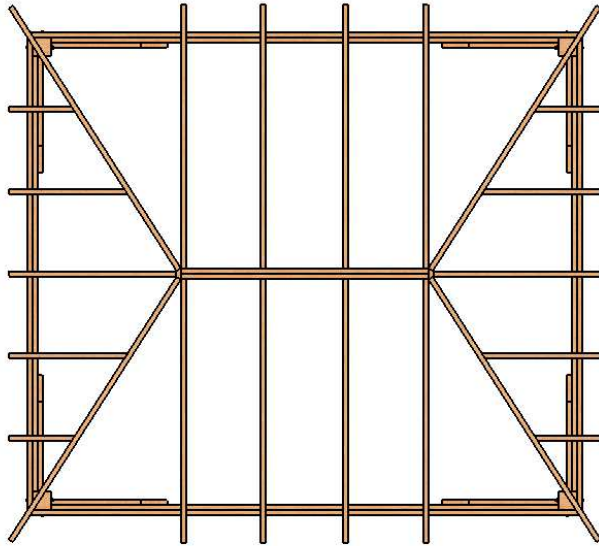
Put the end rafter assemblies together by starting with Item #9 and screwing Items #10 and 11 to the center block as shown below. Use 3" wood screws. Then attach the hip rafters Items #12 and 13 as shown, use one left and one right of each per assembly. Make two of these.



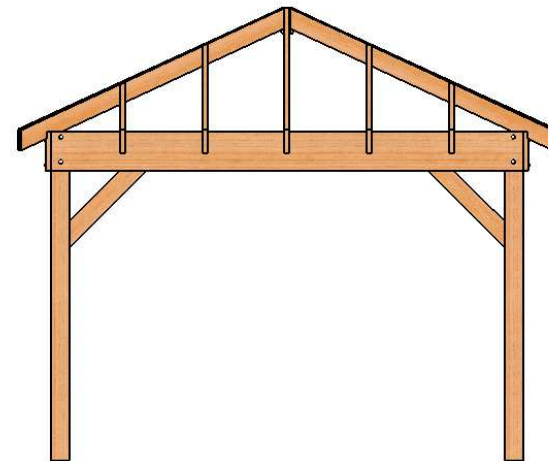
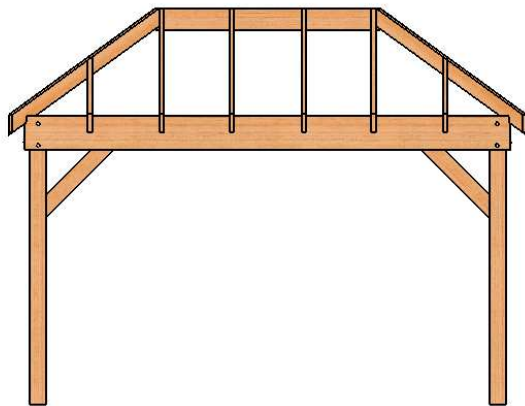
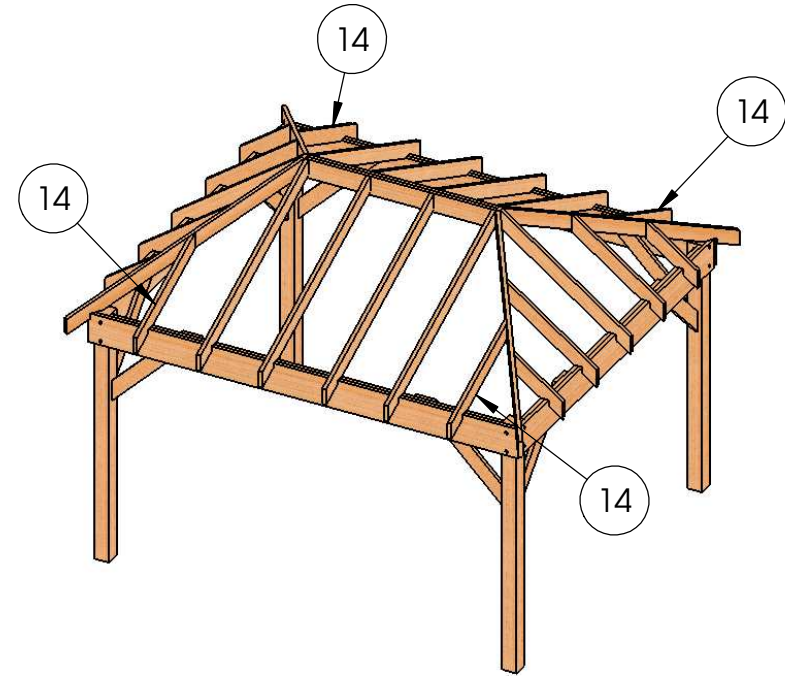
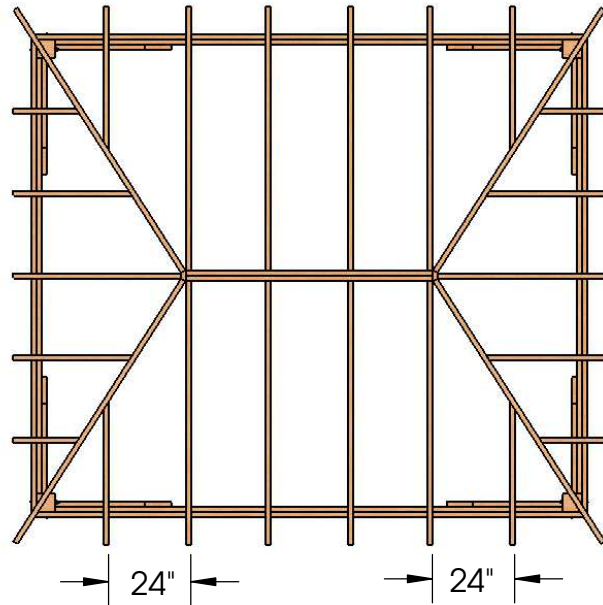
Have some helpers and lift the center rafter assembly onto the gazebo frame. Make sure that it is centered on the frame and the rafters are straight and fasten it to the frame by driving 3" wood screws through each rafter at an angle into the top of the frame.



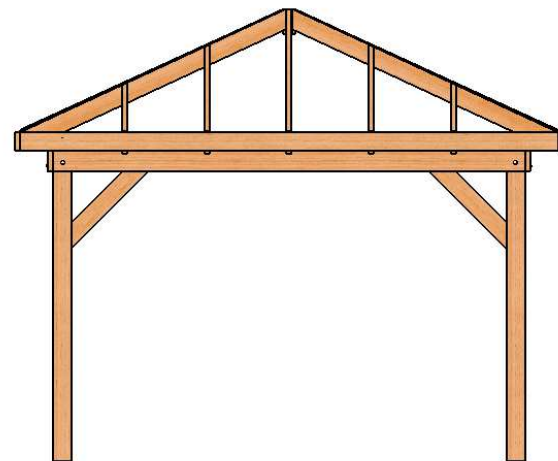
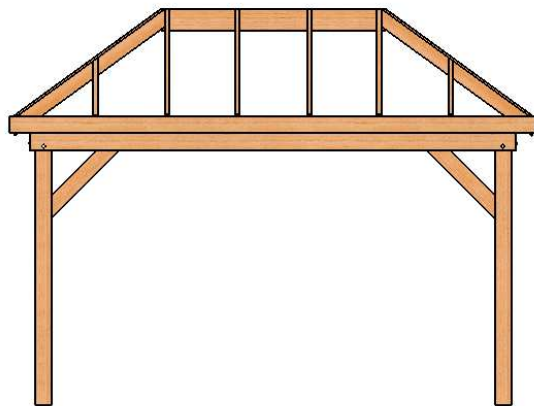
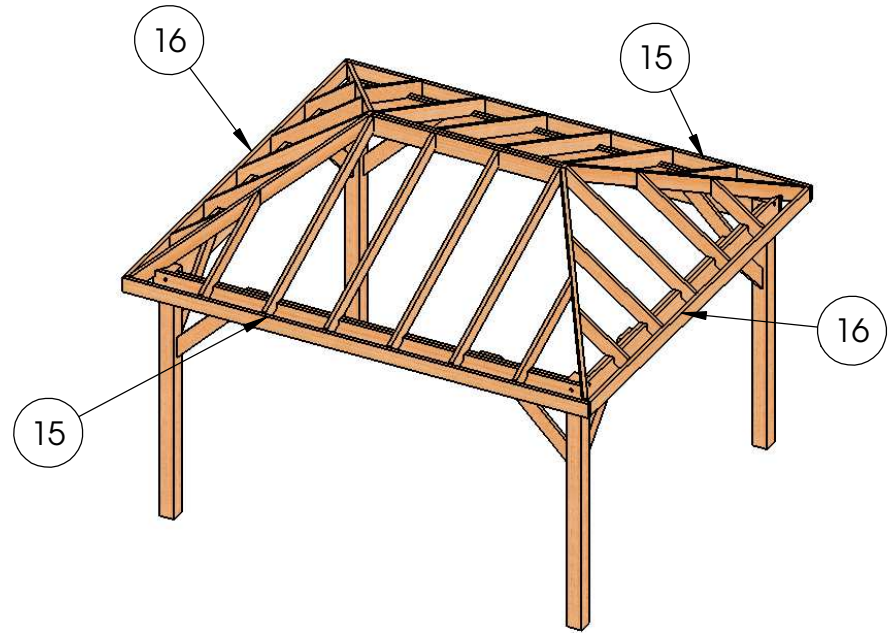
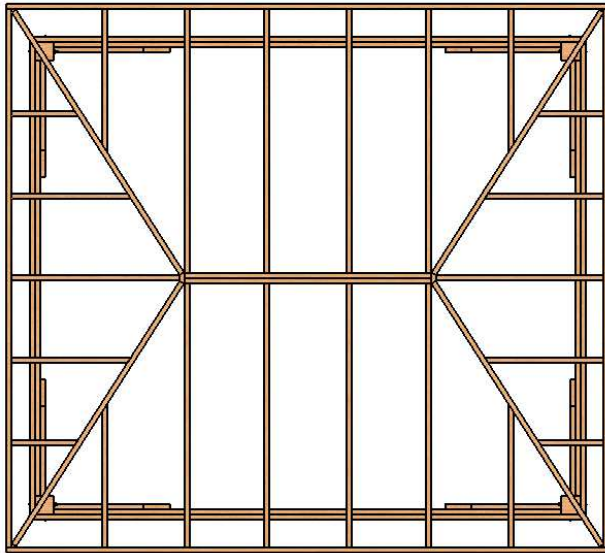
Have your helpers help lift the end rafter assemblies onto the top of the gazebo frame and fasten the same way as the center rafter assembly. Screw the end rafters to the center rafters at the top.



Install the last four hip rafters (Item # 14) on the front and rear of the gazebo frame as shown below. Fasten to the frame and end rafter assembly using 3" wood screws.



Install the roof trim boards (Items # 32 & 33) as shown below by screwing them to the end of each rafter with 3" wood screws.

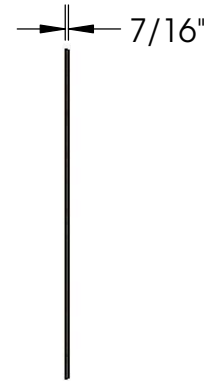


Step 9 - Cut Roof Sheeting

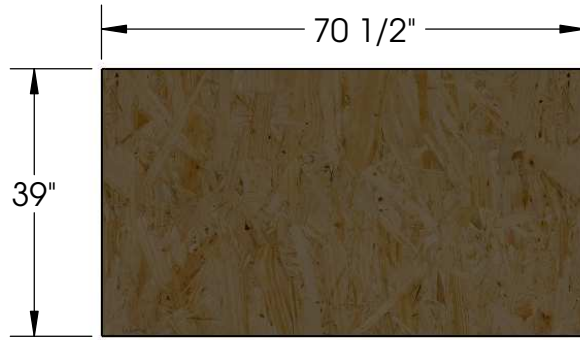
Item No. **S1** Material: 7/16" x 48" x 94-1/2" Sheathing
Qty.: 2



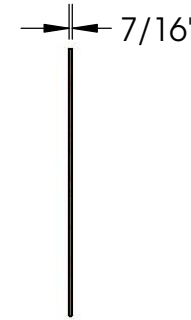
Cut two of the 4' x 8' sheathing sheets down to 48" x 70-1/2".



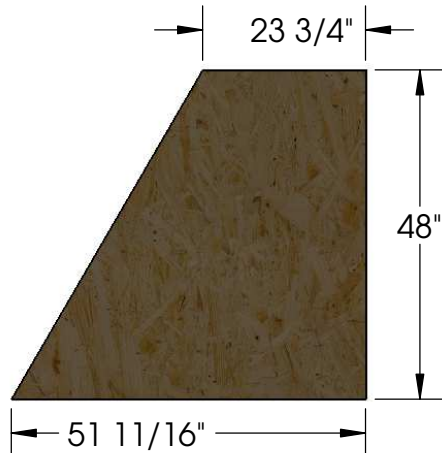
Item No. **S2** Material: 7/16" x 39" x 94-1/2" Sheathing
Qty.: 2



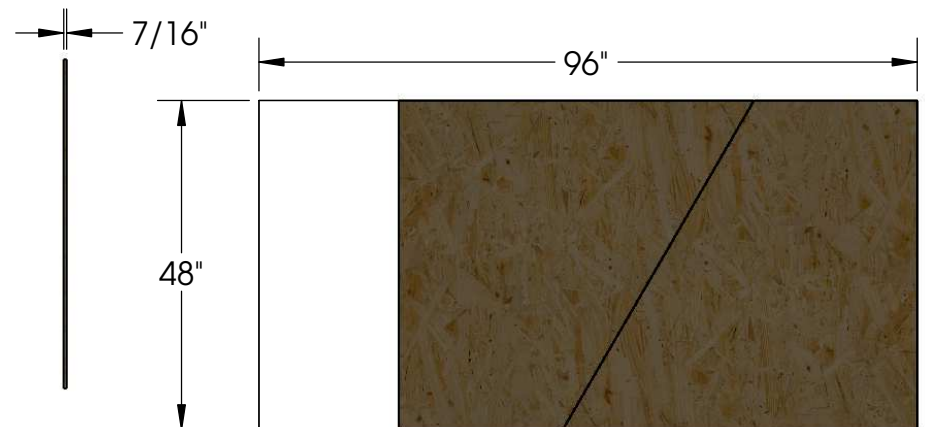
Cut two of the 4' x 8' sheathing sheets down to 39" x 70-1/2".



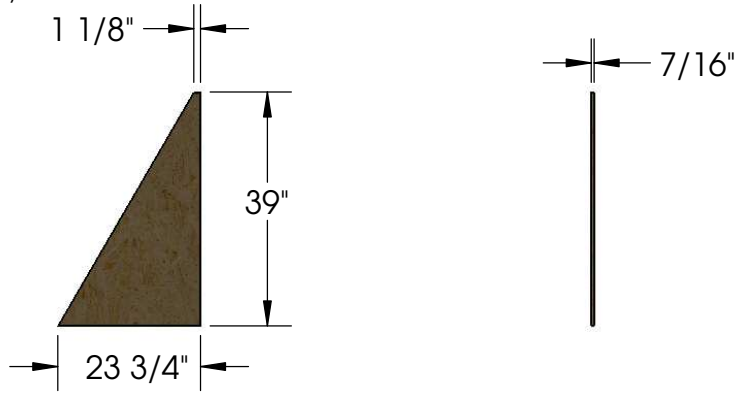
Item No. **S3** Material: 7/16" x 48" x 51-11/16" Sheathing
Qty.: 4



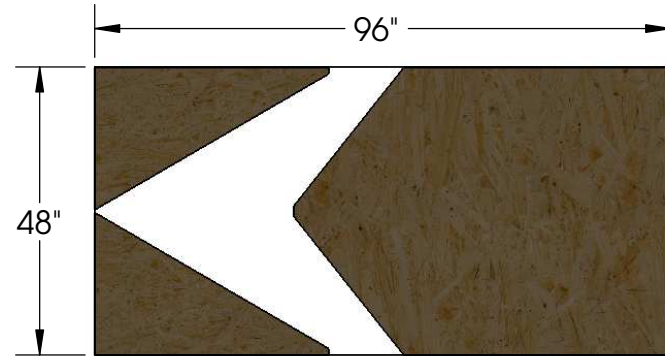
Cut two of the 4' x 8' sheathing sheets as shown below to make four pcs 48" x 51-11/16".



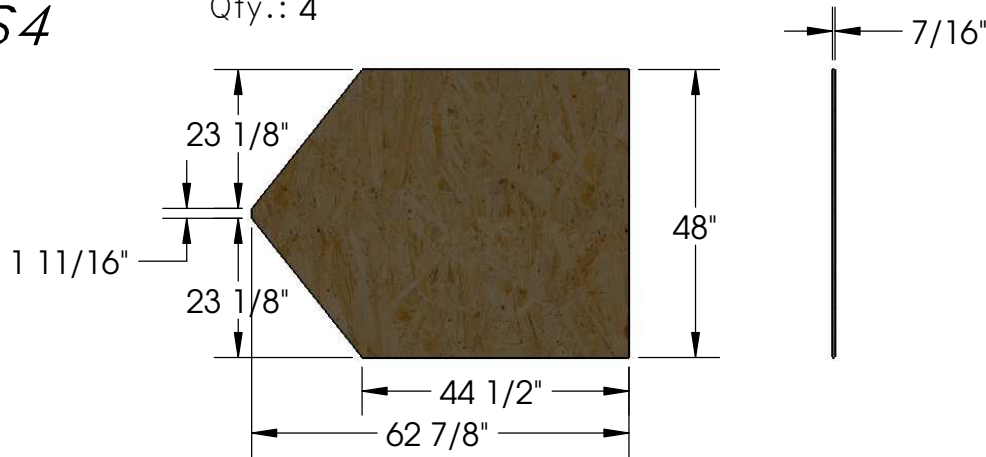
Item No. **S4** Material: 7/16" x 48" x 51-11/16" Sheathing
Qty.: 4



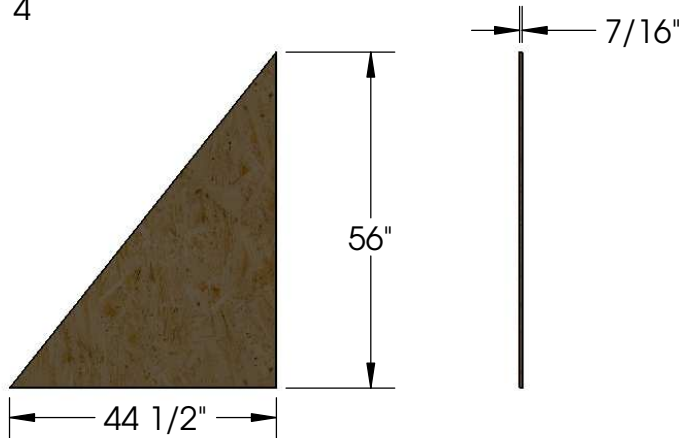
Cut two of the 4' x 8' sheathing sheets as shown below to make four pcs 39" x 32-3/4" and two pcs 48" x 62-7/8".



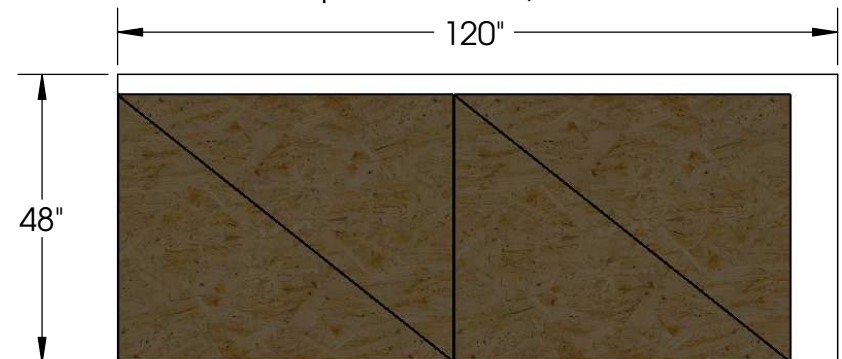
Item No. **S4** Material: 7/16" x 48" x 51-11/16" Sheathing
Qty.: 4



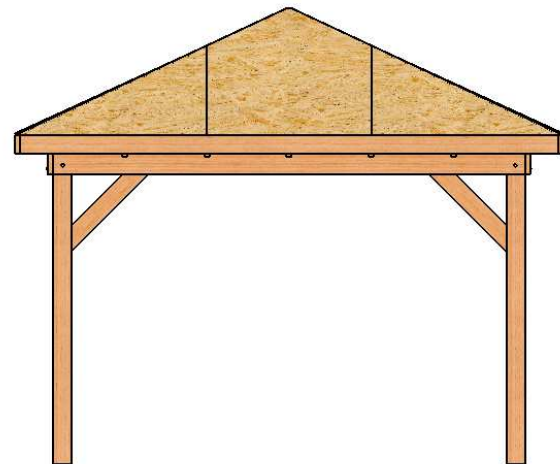
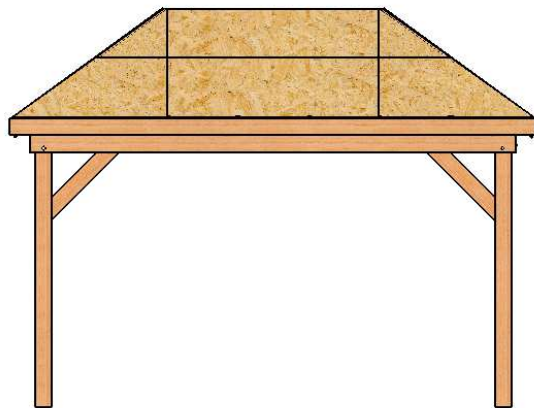
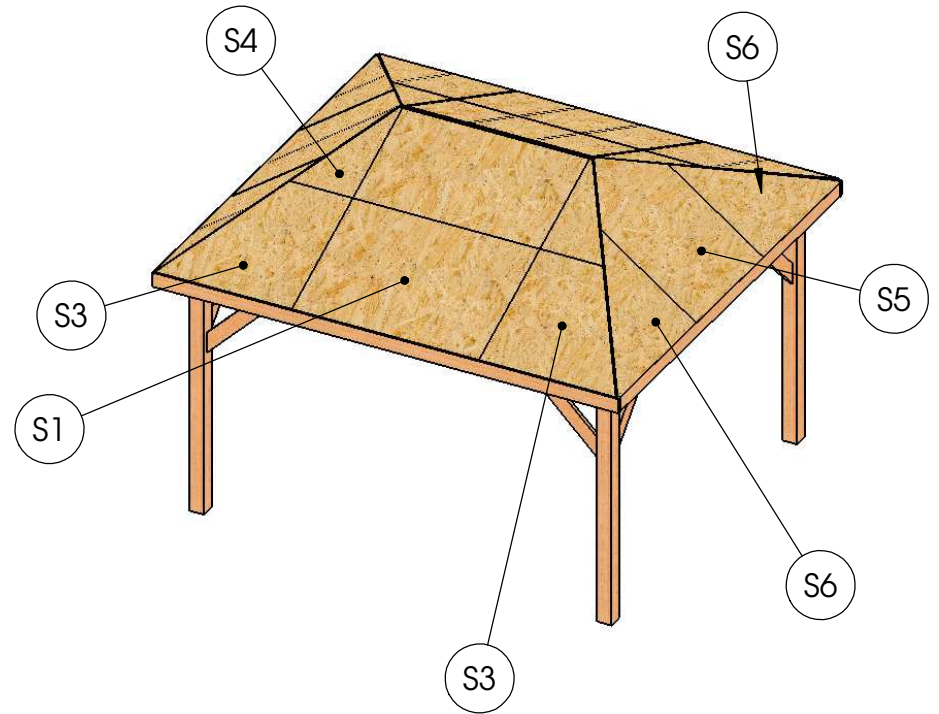
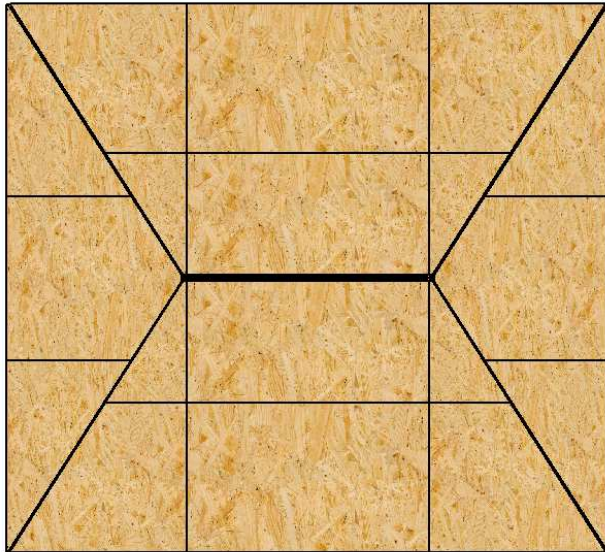
Item No. **S4** Material: 7/16" x 44-1/2" x 56" Sheathing
Qty.: 4



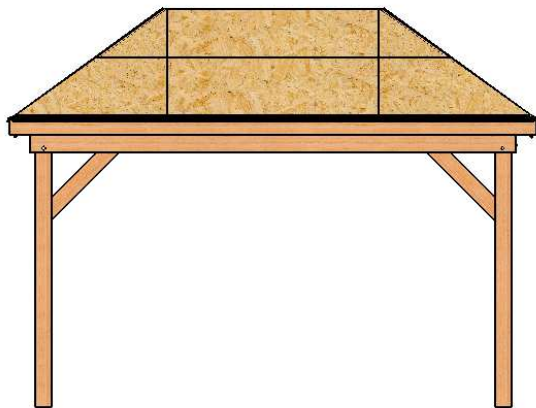
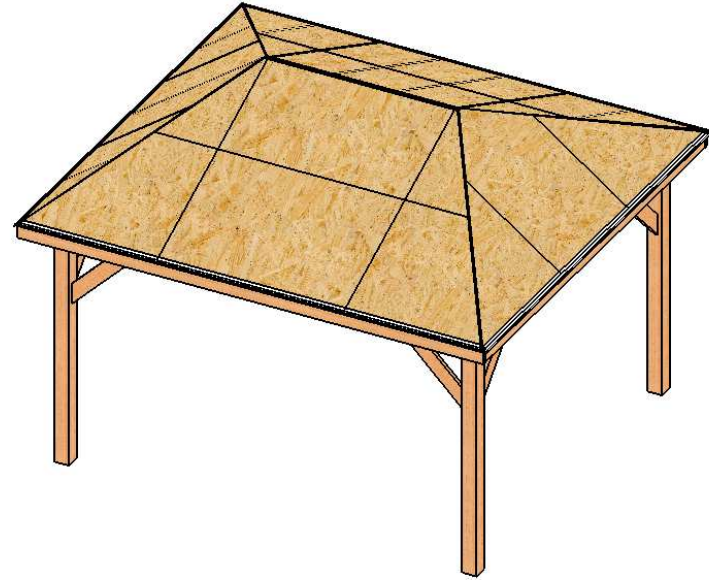
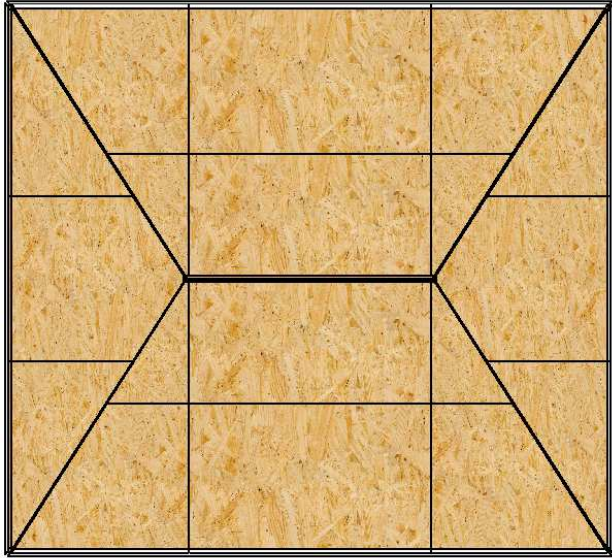
Cut the 4' x 10' sheathing sheet as shown below to make four pcs 56" x 44-1/2".



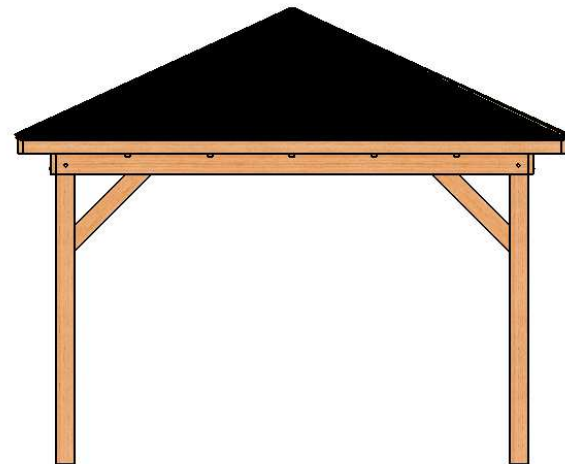
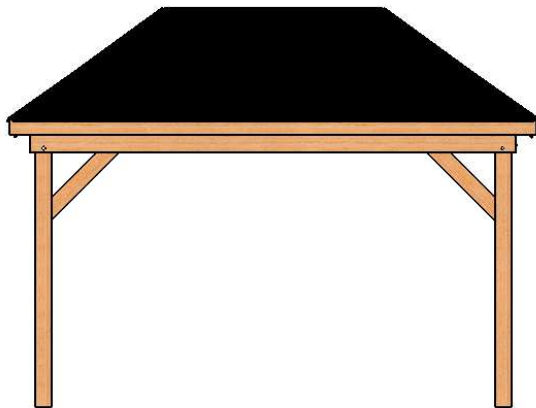
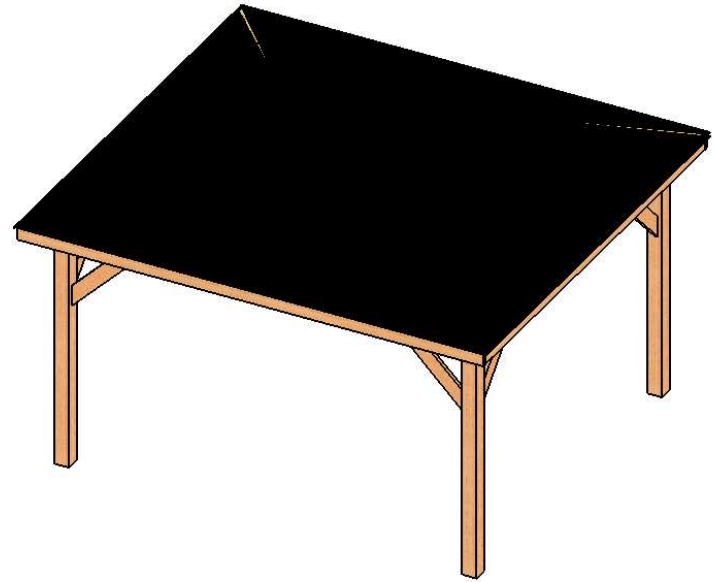
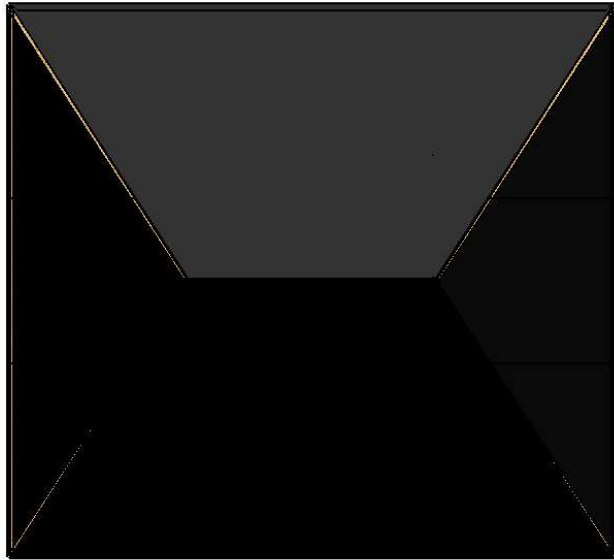
Install the roof sheeting as shown below making sure that each seam is centered on a rafter. Fasten to the rafters with 2" wood screws.



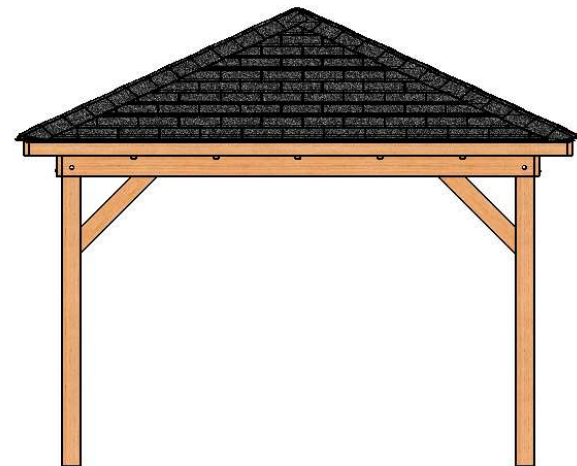
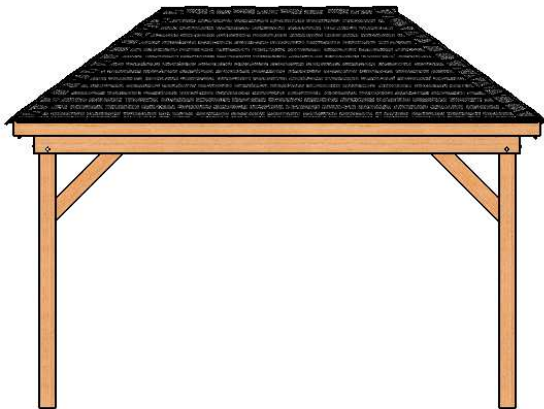
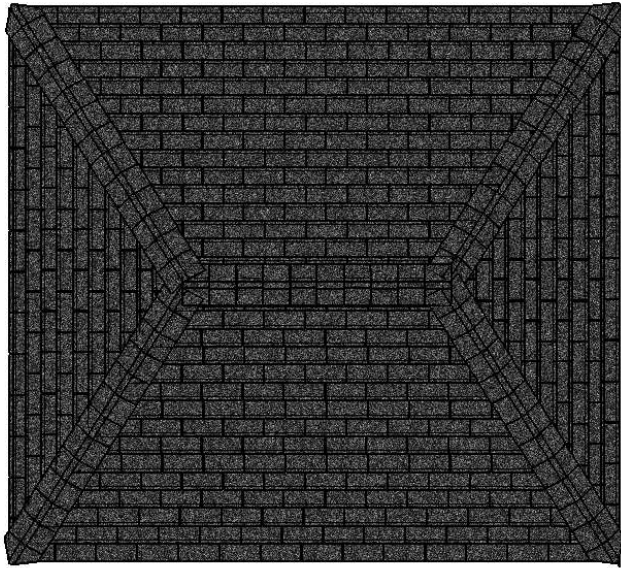
Install drip edge along the lower edge of the roof per manufacturers instructions.



Cover the roof with roofing underlayment and fasten to roof with staples per manufacturers instructions.



Install shingles per manufacturers instructions.





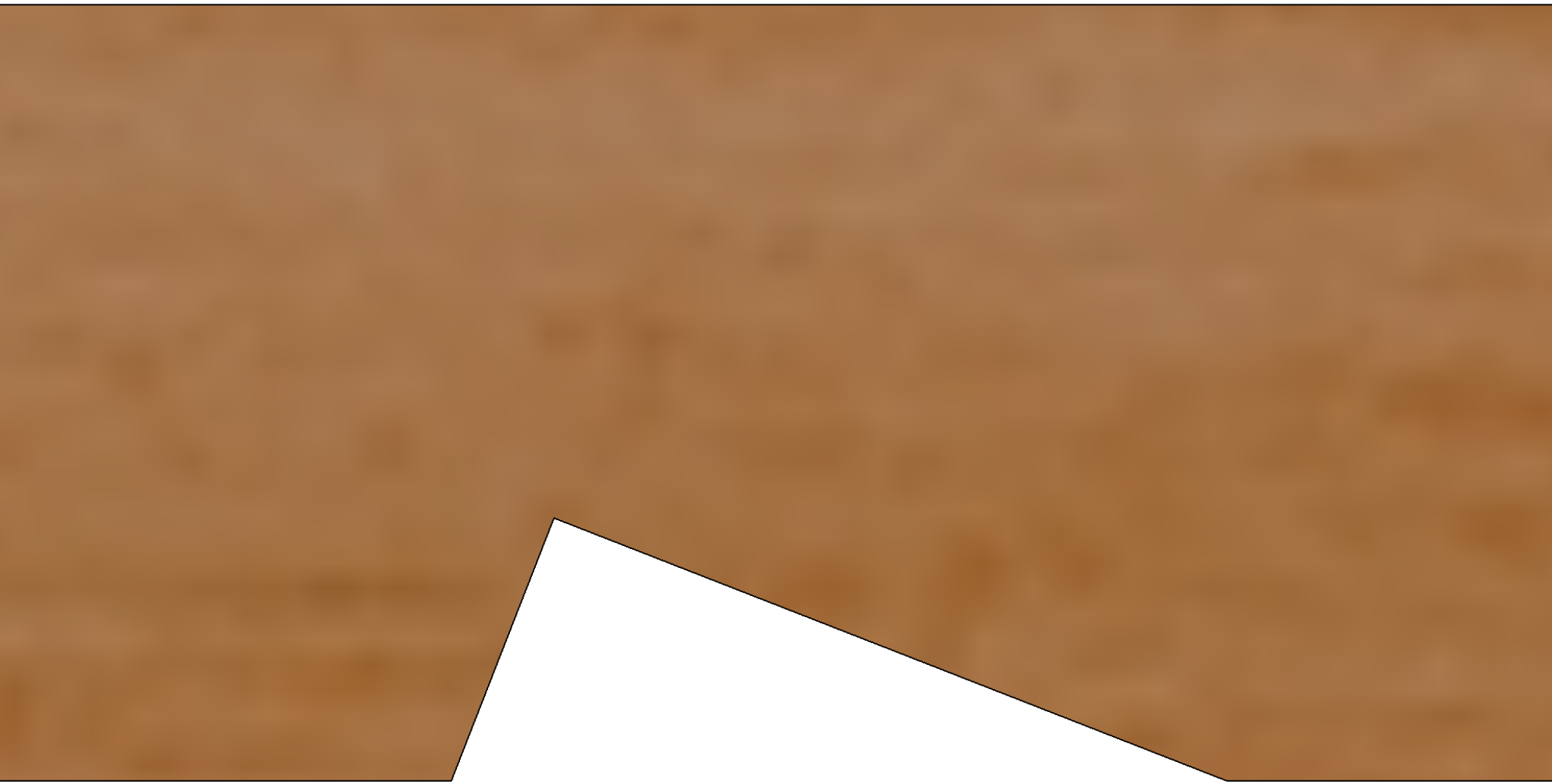
***Item # 25 & # 31
Actual Size
Use for bird's mouth***

Attachment 002



Item # 27, # 29 & # 30
Actual Size
Use for bird's mouth

Attachment 003



***Item # 28
Actual Size
Use for bird's mouth***

Attachment 004

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