

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 14' Gazebo with Hip Roof

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10ft 6 x 6	6 x 6 Lumber x 120" Long	4
2	Front Stringer	2 x 10 Lumber x 168" Long	2
3	Side Stringer	2 x 10 Lumber x 165" Long	2
4	Brace 001	2 x 6 Lumber x 48" Long	8
5	Rafter 001	2 x 8 Lumber x 148-7/16" Long	2
6	Rafter 002	2 x 8 Lumber x 147-5/8" Long	2
7	Center Rafter	2 x 8 Lumber x 113-7/16" Long	4
8	Rafter 003	2 x 8 Lumber x 85-7/16" Long	4
9	Rafter 004	2 x 8 Lumber x 85-7/16" Long	4
1	Rafter 005	2 x 8 x Lumber 56-5/8" Long	4
1	Rafter 006	2 x 8 Lumber x 56-5/8" Long	4
1	Rafter 007	2 x 8 Lumber x 27-15/16" Long	4
1	Rafter 008	2 x 8 Lumber x 27-15/16" Long	4
1	Eave Board	2 x 8 Lumber x 193-7/16" Long	4

### Raw Materials Needed

DESCRIPTION	QTY.
6 x 6 x 10ft Long	4 pcs
2 x 10 x 14ft Long	4 pcs
2 x 8 x 18ft Long	4 pcs
2 x 8 x 14ft Long	4 pcs
2 x 8 x 10ft Long	4 pcs
2 x 8 x 8ft Long	16 pcs
2 x 6 x 8ft Long	4 pcs
15/32" x 4' x 8' Plywood	12 pcs
#9 x 2-1/2" Exterior Screws	15 lbs
1/2" x 8" Carriage Bolts	16 pcs
1/2" Flat Washers	16 pcs
1/2" Flange Nuts	16 pcs
Aluminum Drip Edge	70 ft
Roofing Underlayment	1 roll
Shingles	320 Sq. Ft.
Ridge Cap	50 ft

### Step 1 - Cut Boards to Length

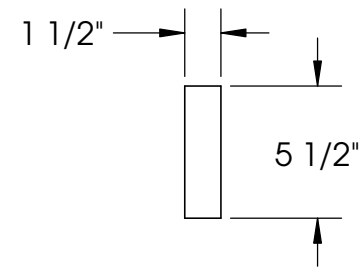
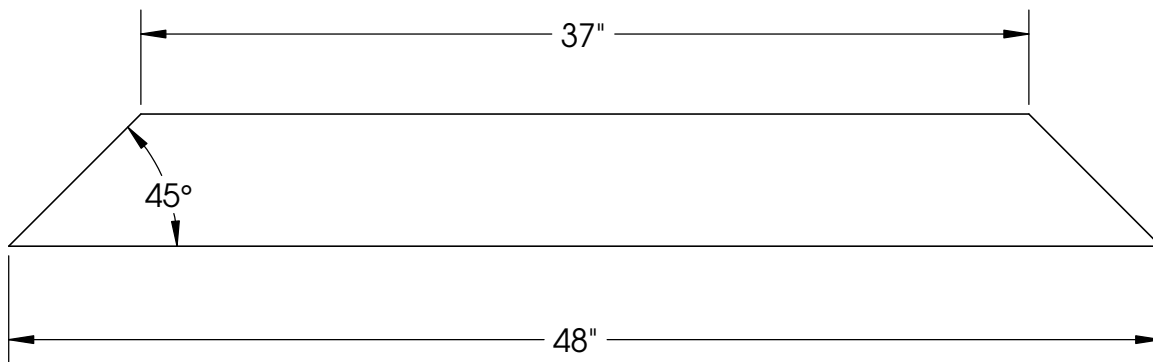
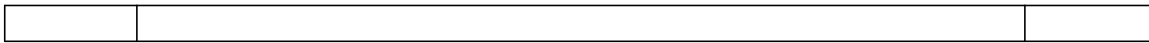
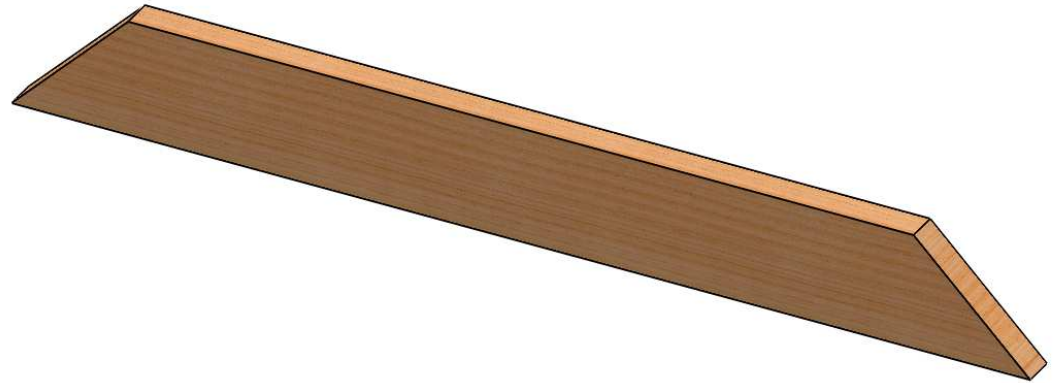
- Items # 1 & 2 do not need to be cut
- Cut 2 pcs 165" Long out of two of the 14ft 2 x 8's (Item # 3)
- Cut 8 pcs 48" long out of the four 8ft 2 x 6's (Item # 4) - See Page 2 for angle detail
- Cut Rafters 001 (Item # 5) and Rafters 002 (Item # 6) out of four of the 14ft 2 x 8's - See Page 5 for cutting instructions
- See pages 9-11 for instructions for cutting Items # 7-14



## Step 2 - Miter Leg Braces

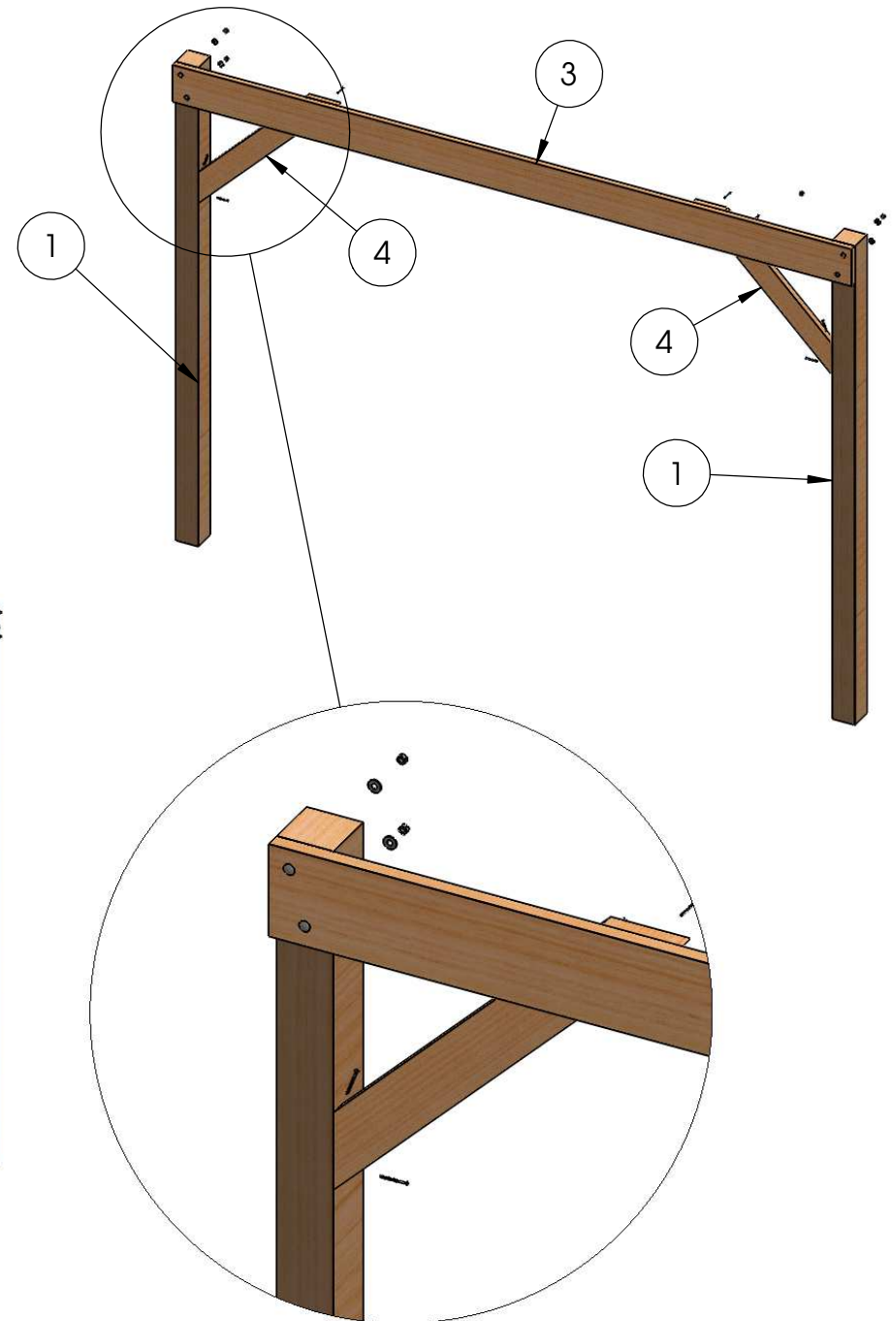
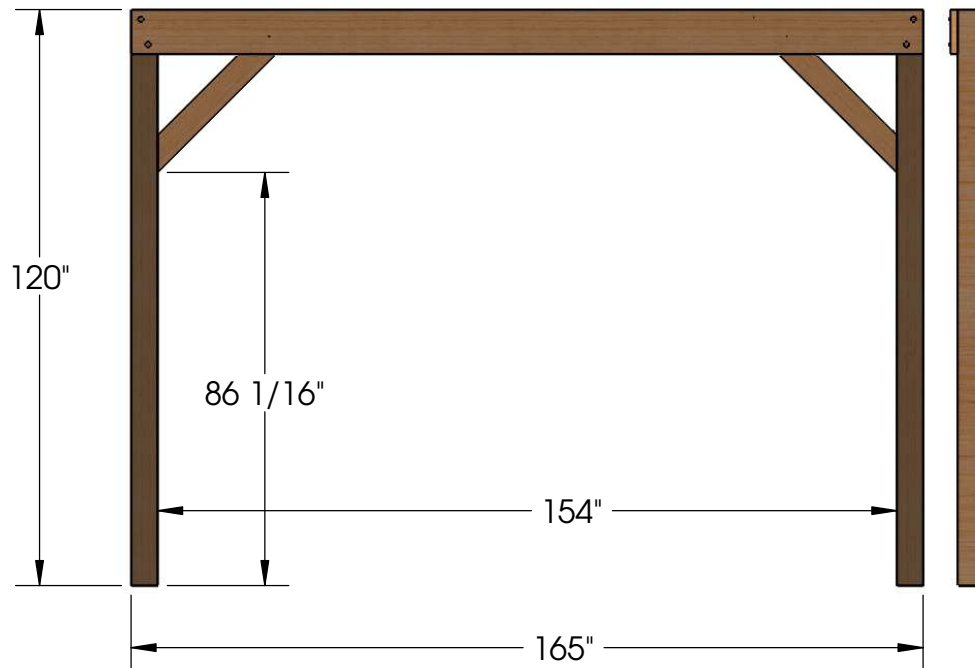
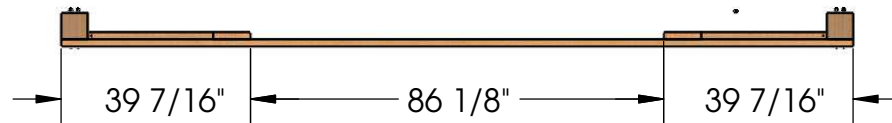
Item No. 4 Material: 2 x 6 Lumber x 48" Long  
Qty.: 8

Using the eight 48" Long 2 x 6's that you cut in Step 1 (Item No. 3)  
Miter cut a 45° angle on each end as shown below.



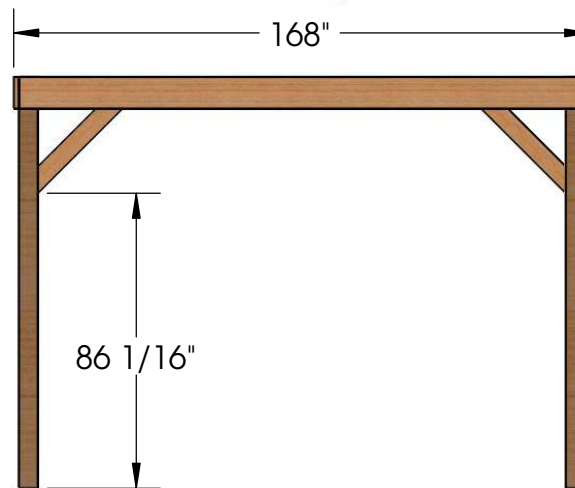
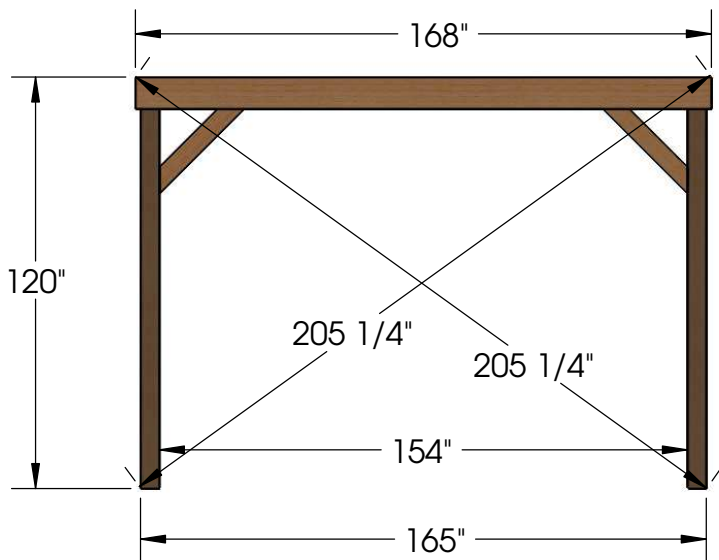
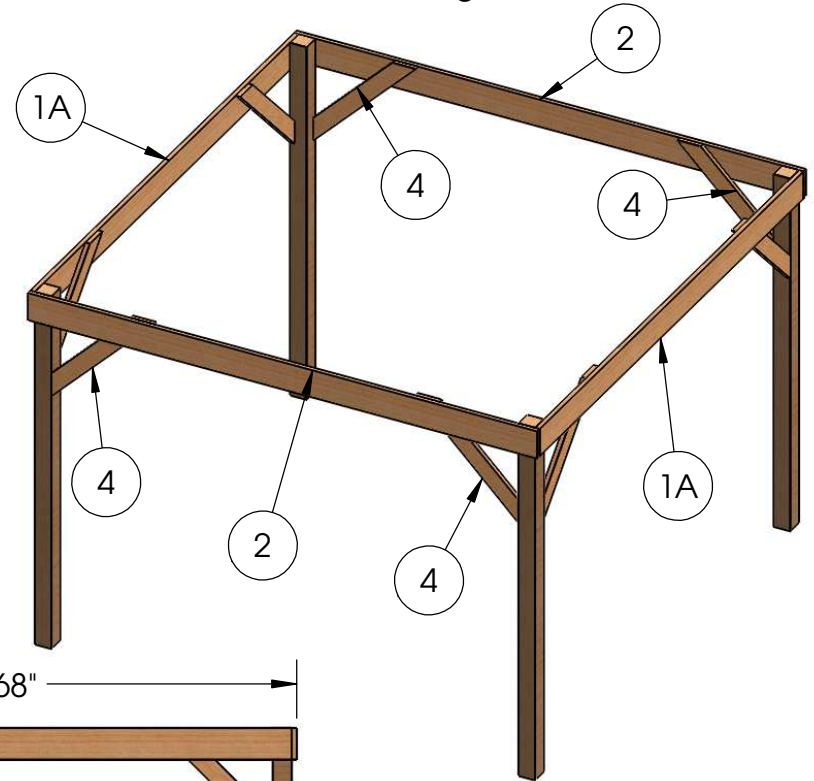
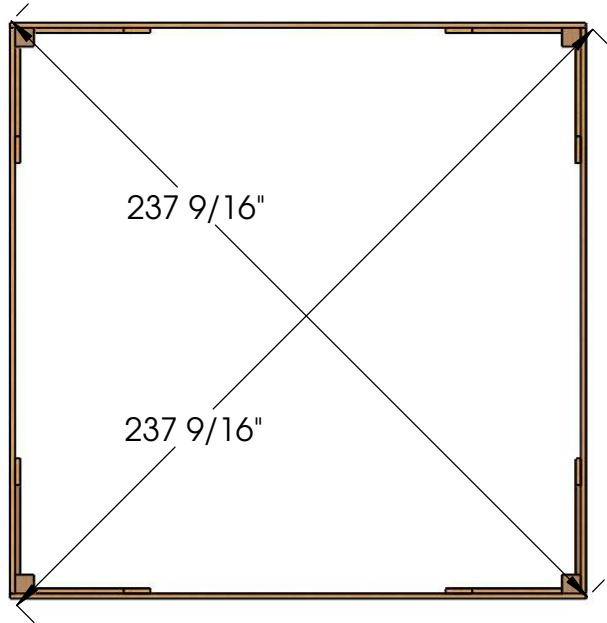
Item No. Material: Gazebo End  
Qty.: 2  
**1A**

Lay out 2 of the 10' 6 x 6's (Item # 1) 154" apart and lay a 165" 2 x 10 (Item # 3) across the top of them. Start with one side and square up the 2 x 10 and make sure it is flush with the edge and top of the 6 x 6. Then drill two 1/2" holes through both boards in a diagonal pattern. See illustration below. Bolt boards together using two 1/2" x 8" Carriage Bolts and nuts and washers. Repeat with the other side. Next screw in braces (Item #4) using 2-1/2" Deck Screws. Screw brace to top board first, then make sure end is square before screwing brace to 6 x 6 leg. See illustration below.



Item No. Material: Gazebo Base  
**1B** Qty.: 1

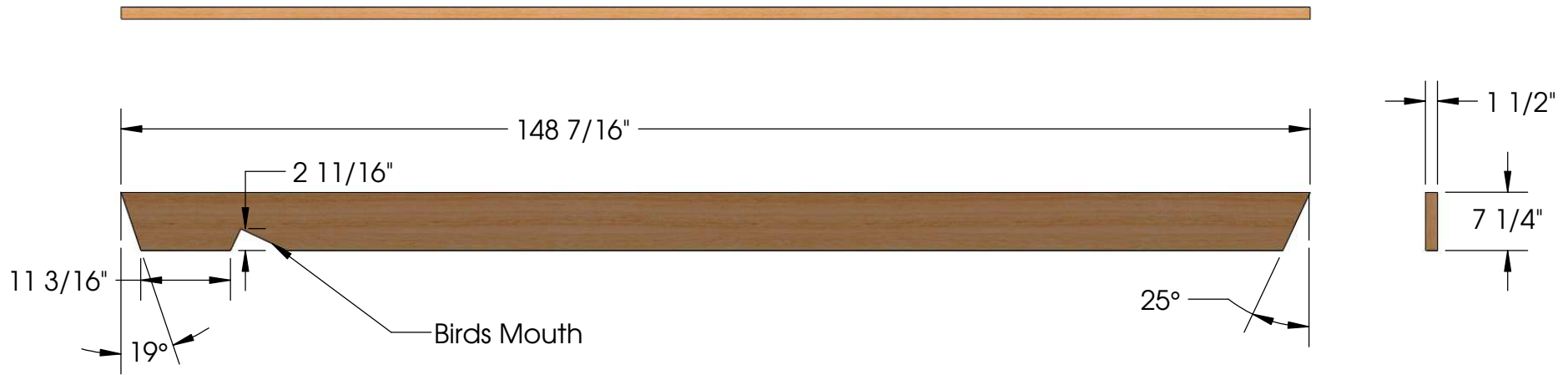
Stand up the 2 Gazebo Ends (Item # 1A) that you assembled in Step 3 (this will require more than one person). Then clamp the 14ft 2 x 10's (Item # 2) to each side and drill and bolt with 1/2" x 8" Carriage Bolts the same way you did in Step 3. Finally, make sure the sides and top are square by cross measuring and screw the Leg Braces (Item # 4) to the sides the same way you did in Step 3. See illustrations below and on Page 3.



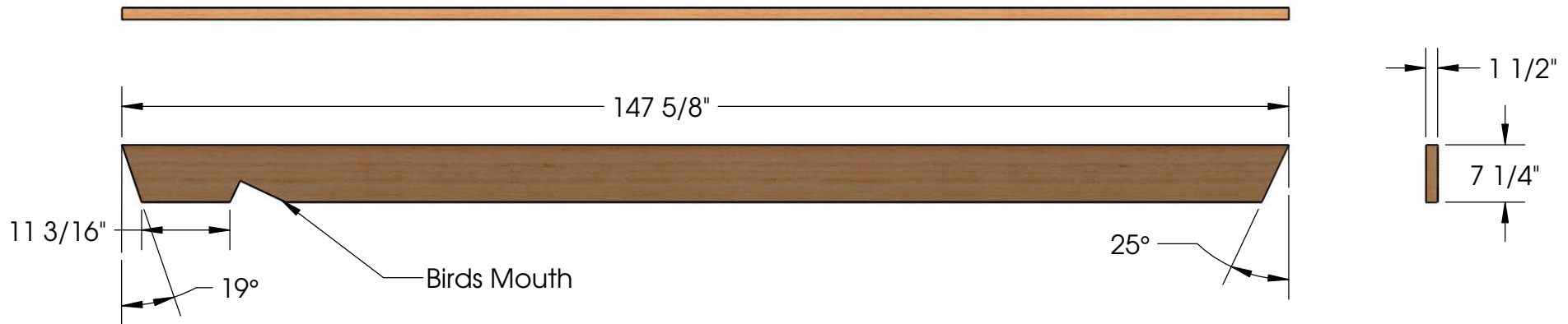
# Step 5 - Cut Rafters

Item No. 5 Material: 2 x 8 x 148-7/16" Long  
Qty.: 2

Using four 14ft 2 x 6's cut Rafter 001 (Item #5) and Rafter 002 (Item #6) as shown below. See Attachment 001 and Attachment 002 at the end of these instructions for templates for the birds mouth and angles.



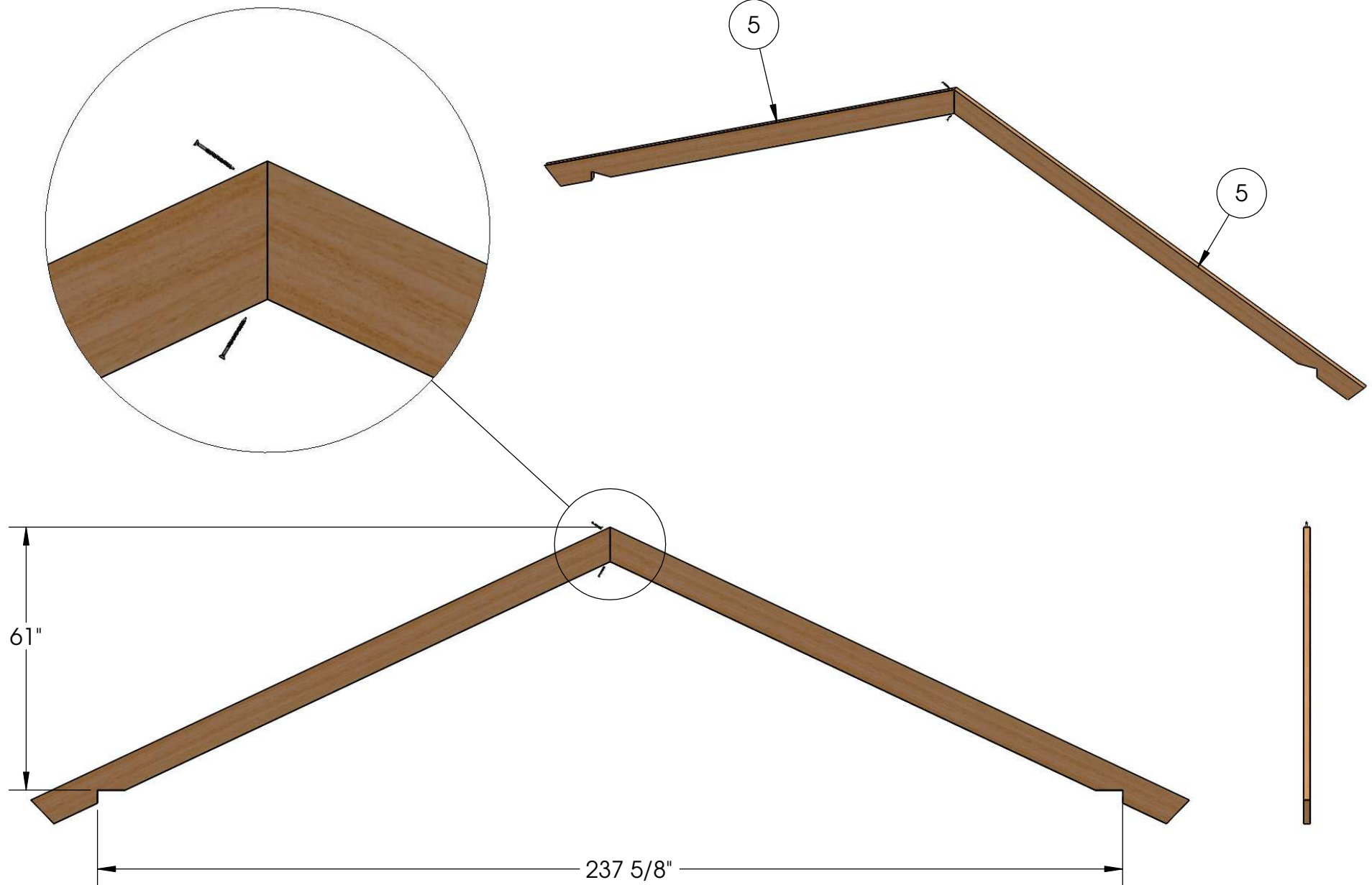
Item No. 6 Material: 2 x 8 x 147-5/8" Long  
Qty.: 2

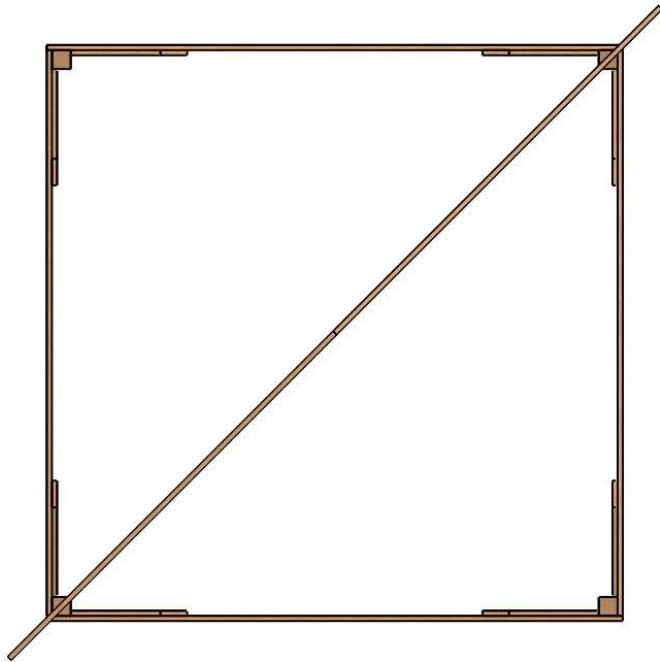


# Step 6 - Assemble Rafter

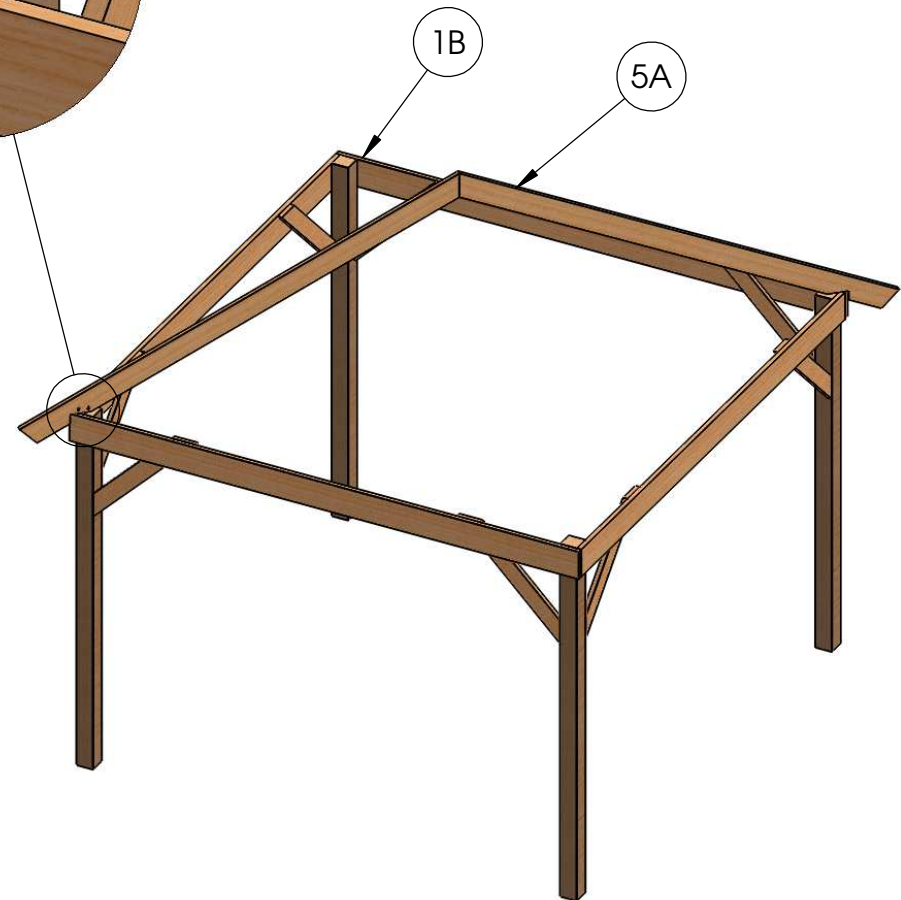
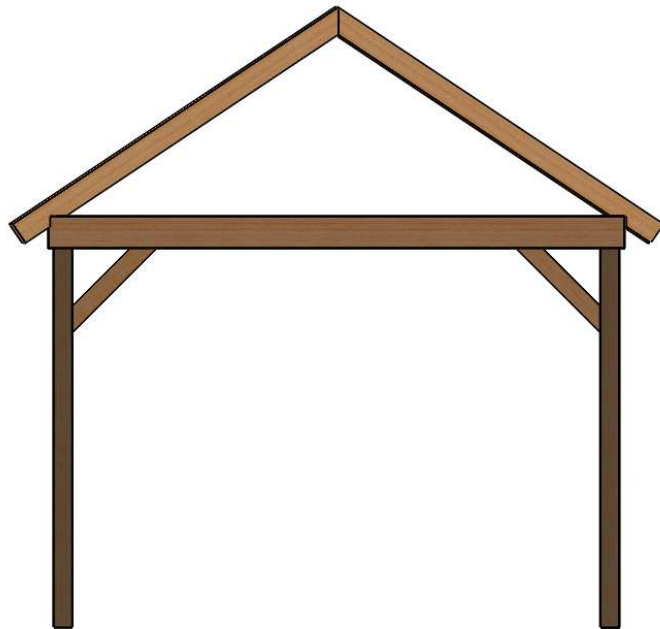
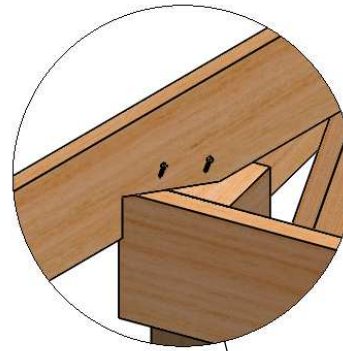
Item No. Material: Rafter Sub-Assembly  
5A Qty.: 1

Lay out the 2 - 148-7/16" 2 x 8's (Item #5) that you miter cut in Step 5 end to end as shown below and screw together using 2 screws just to hold them together as shown below.



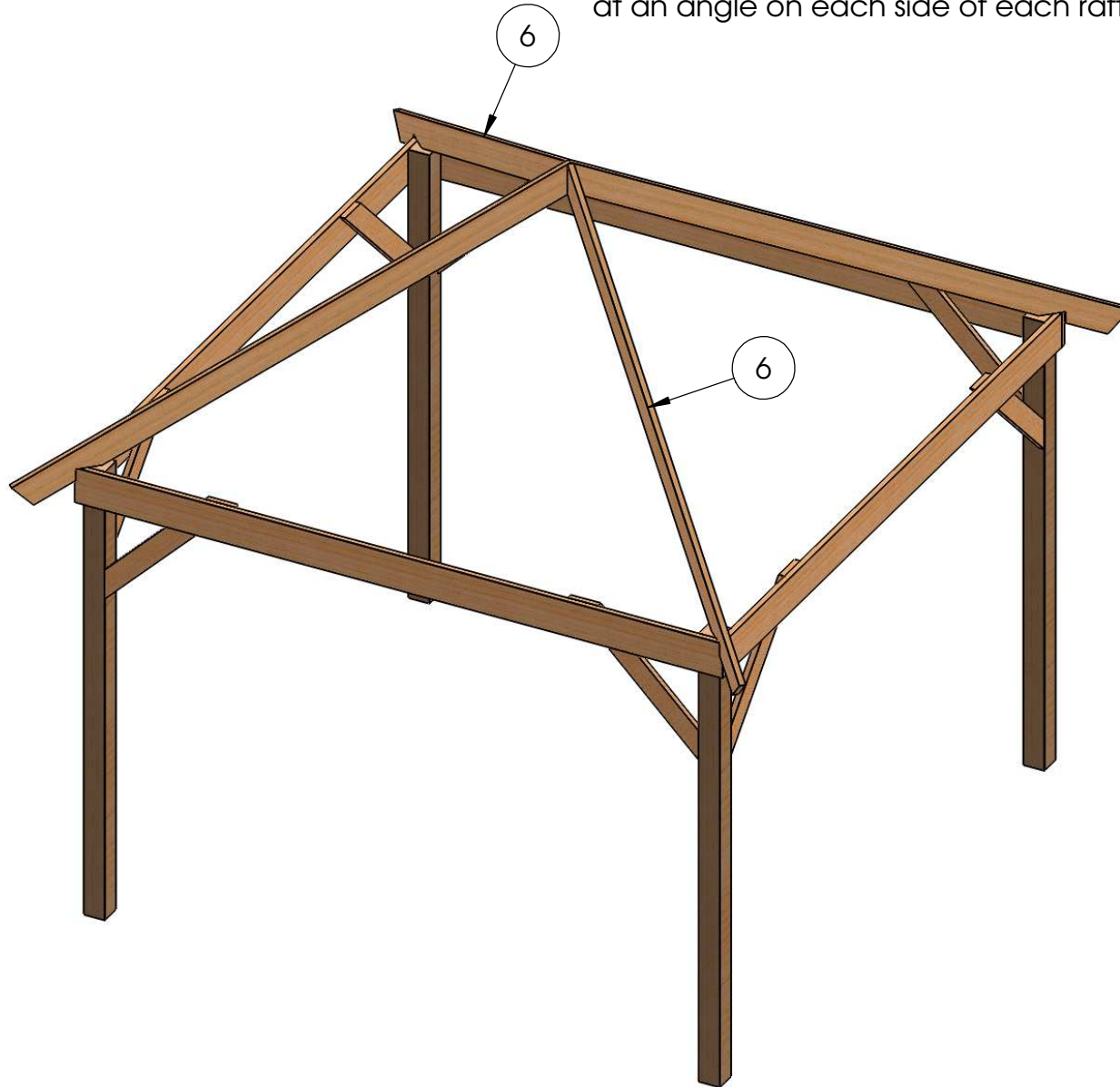


Attach rafter sub-assembly (Item #5A) to the gazebo base as shown below using 2 screws on each side of the board at each corner. See illustration below.





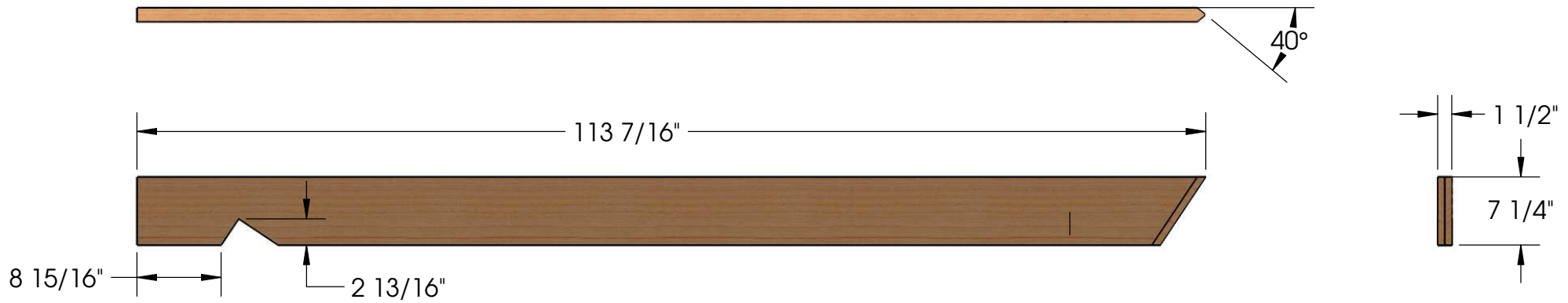
Attach the next 2 rafters (Item #6) to the gazebo base as shown below using 2 screws on each side of the board at each corner screwed in at an angle the same way you attached the rafter sub-assembly in Step 7. Screw rafters to rafter sub-assembly at the top using 2 screws screwed in at an angle on each side of each rafter. See illustration below.



# Step 9 - Cut Remaining Rafters

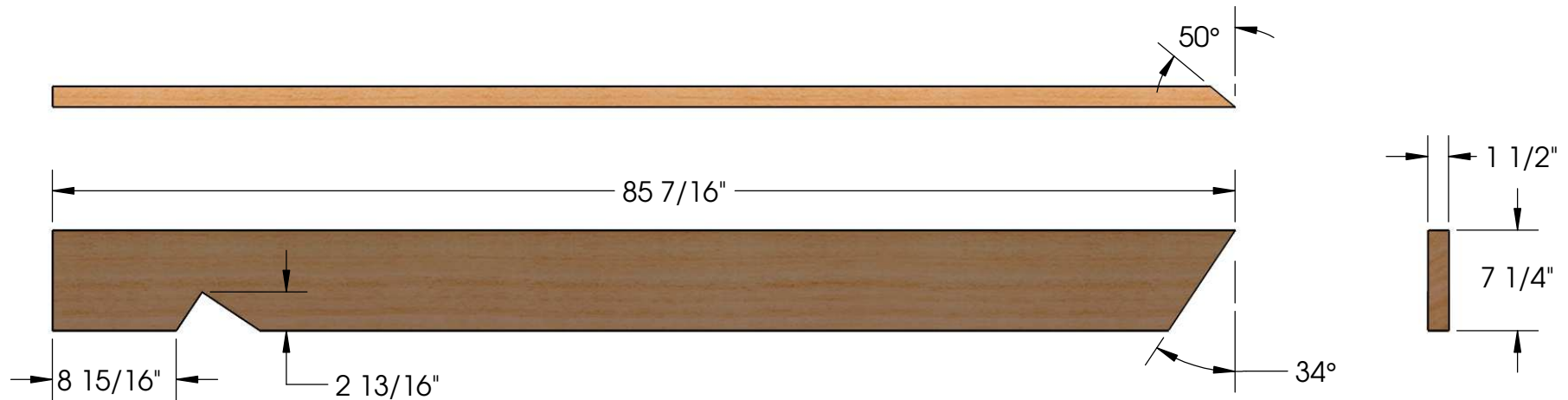
Item No. 7 Material: 2 x 8 x 113-7/16" Board  
Qty.: 4

Cut the four 113-7/16" 2 x 8' Center Rafters (Item #7) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 005 for a template for cutting the angles.



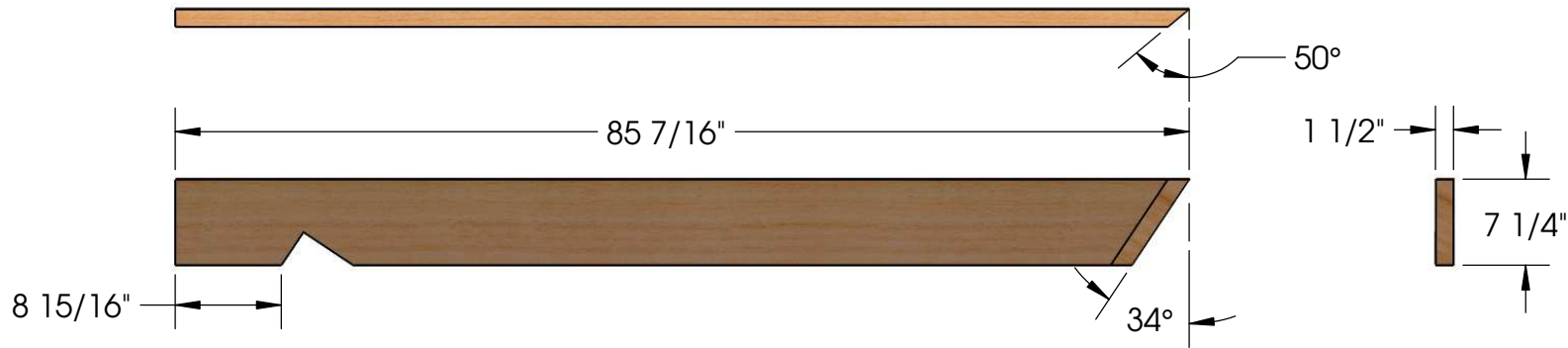
Item No. 8 Material: 2 x 8 x 85-7/16" Board  
Qty.: 4

Cut two of the 8ft 2 x 8's into two 85-7/16" Rafters 003 (Item #8) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 006 for a template for cutting the angles.



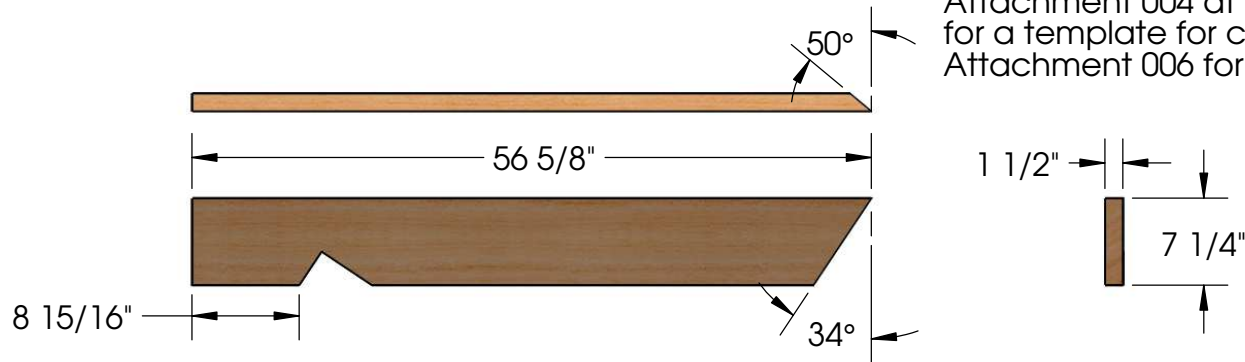
Item No. 9 Material: 2 x 8 x 85-7/16" Board  
Qty.: 4

Cut four of the 8ft 2 x 8's into four 85-7/16" Rafters 004 (Item #9) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 007 for a template for cutting the angles.



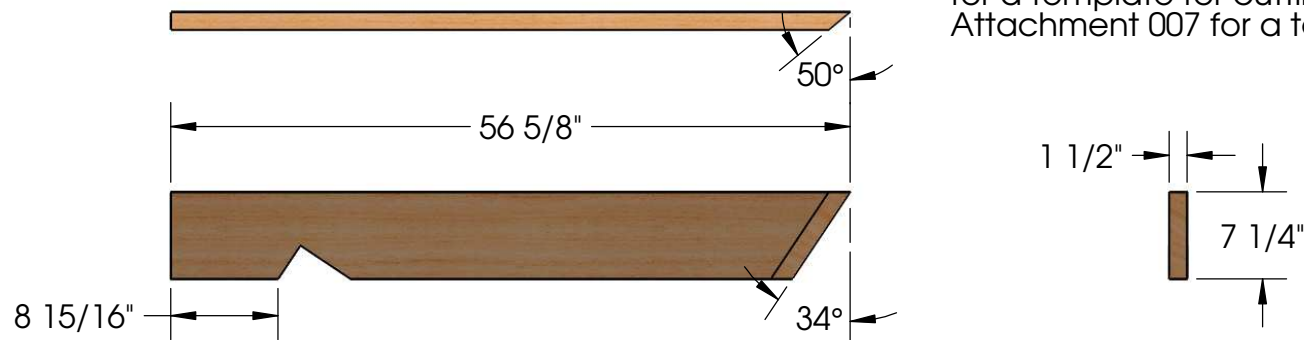
Item No. 10 Material: 2 x 8 x 56-5/8" Board  
Qty.: 4

Using four of the 8ft 2 x 8's cut four 56-5/8" Rafters 005 (Item # 10) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 006 for a template for cutting the angles.

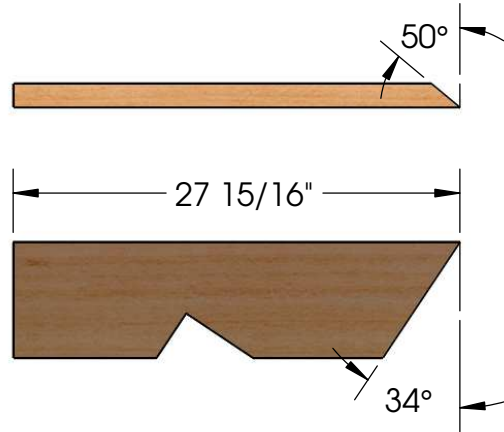


Item No. 11 Material: 2 x 8 x 56-5/8" Board  
Qty.: 4

Using four of the 8ft 2 x 8's cut four 56-5/8" Rafters 006 (Item # 11) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 007 for a template for cutting the angles.

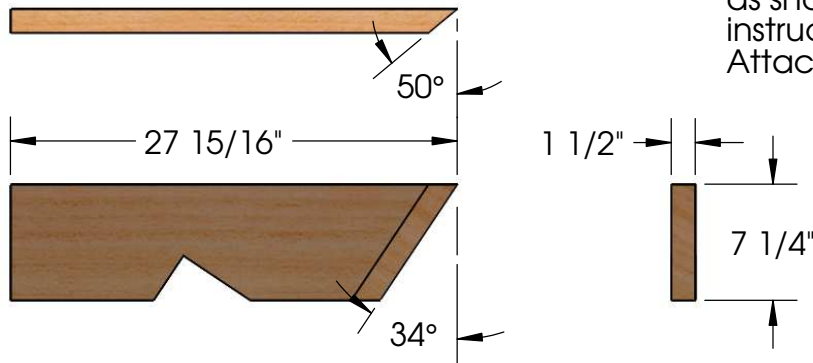


Item No. 12 Material: 2 x 8 x 27-15/16" Board  
Qty.: 4



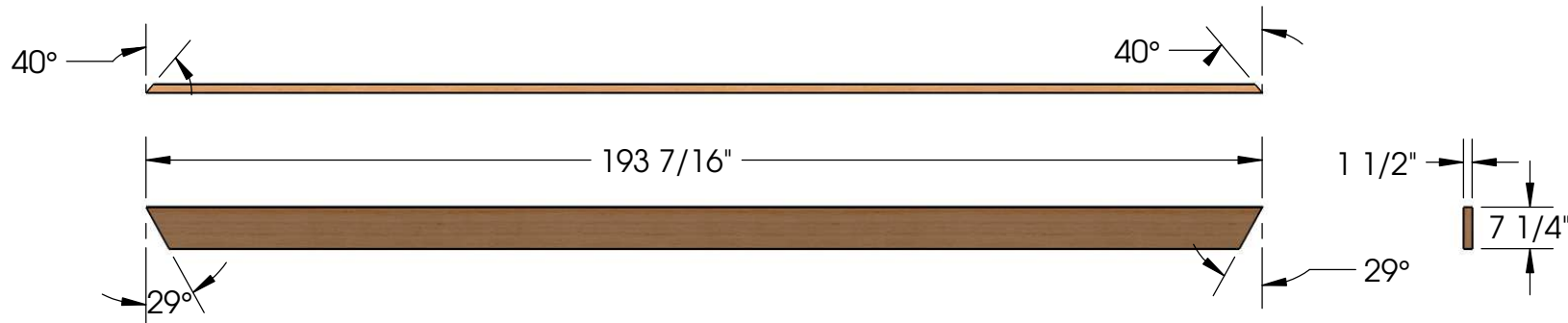
Using the 2 x 8's left over from cutting Item # 10 Cut four 27-15/16" Rafters 007 (Item # 12) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 006 for a template for cutting the angles.

Item No. 13 Material: 2 x 8 x 27-15/16" Board  
Qty.: 4



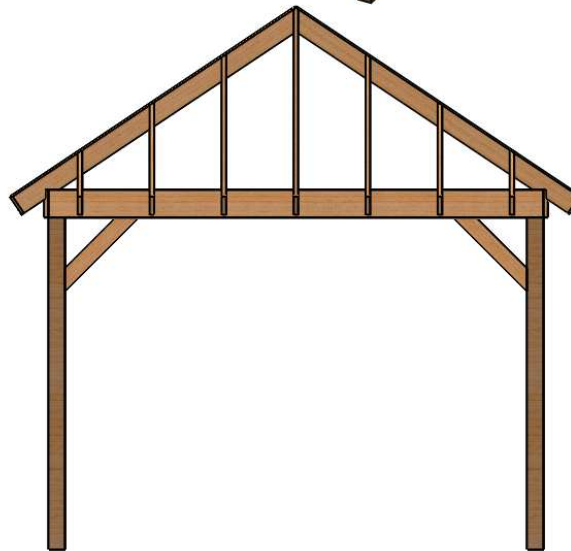
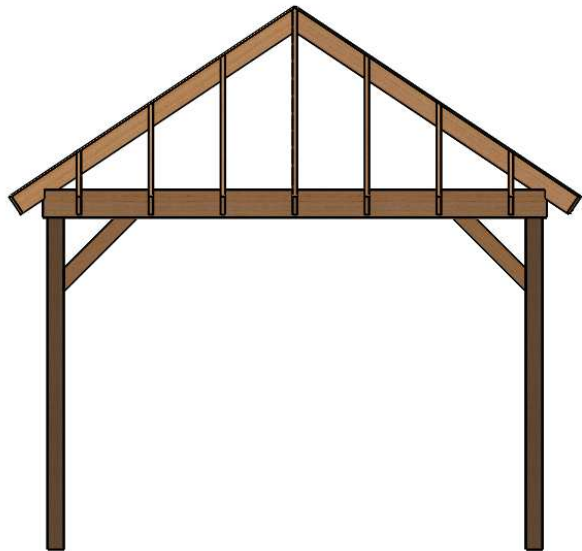
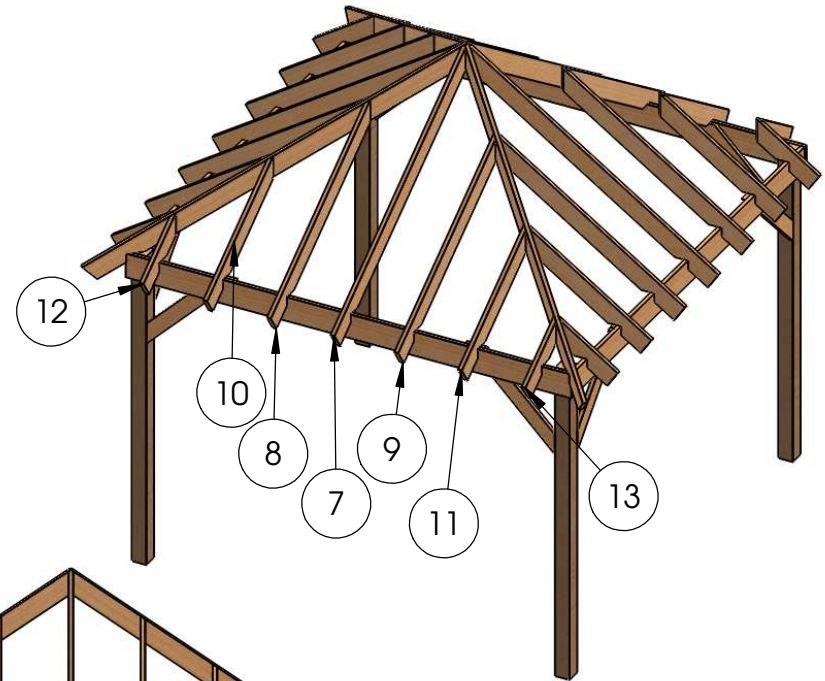
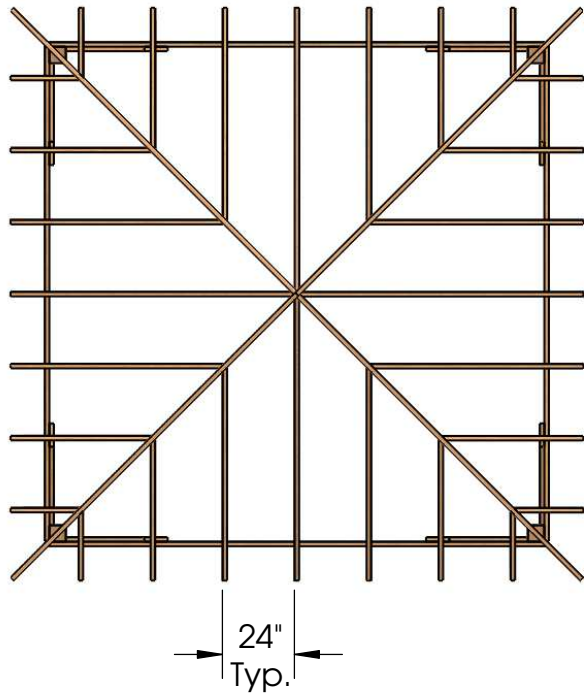
Using the 2 x 8's left over from cutting Item # 11 Cut four 27-15/16" Rafters 007 (Item # 13) and cut the angles as shown below. See Attachment 004 at the end of these instructions for a template for cutting the Bird's Mouth. See Attachment 007 for a template for cutting the angles.

Item No. 14 Material: 2 x 8 x 193-7/16" Board  
Qty.: 4

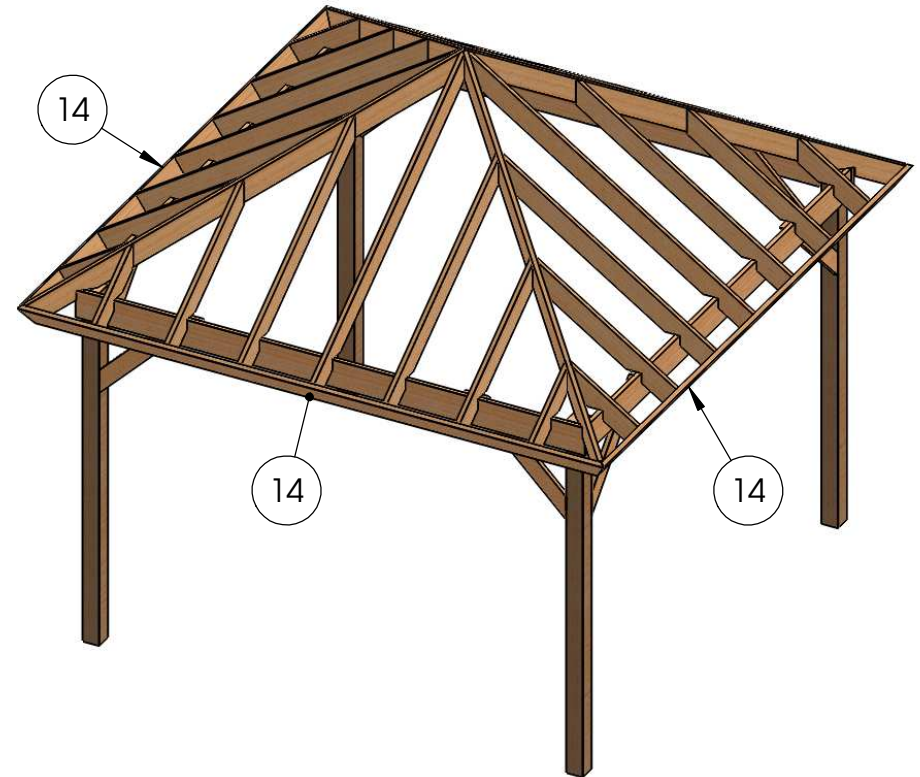
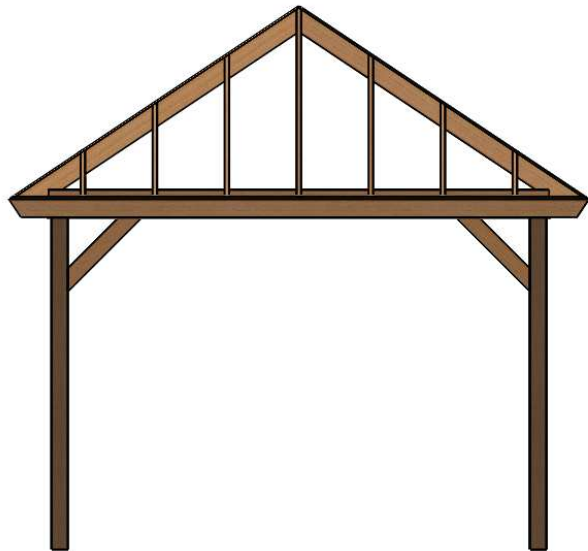
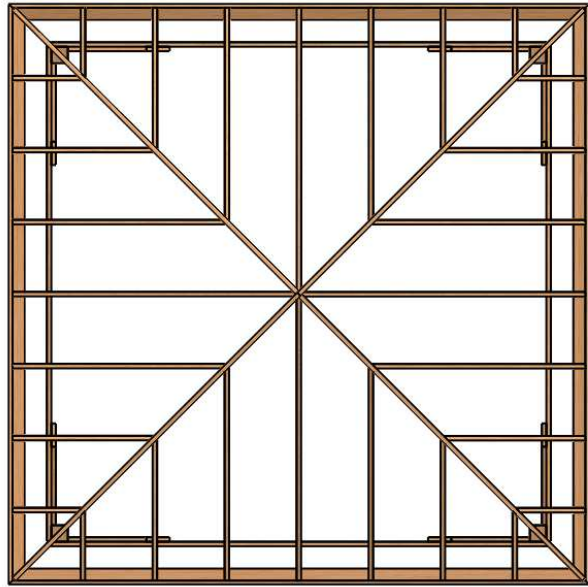


Cut Eave Boards (Item # 14) out of the 18ft 2 x 8's to 193-7/16" long with a compound miter on both ends as shown below. See Attachment 008 at the end of these instructions for a template for cutting angles.

Install the center rafter (Item #7) in the center of each side and the remaining rafters (Items #8, 9, 10, 11, 12, & 13) to the gazebo base as shown below using 2 screws on each side of the board at each corner screwed in at an angle the same way you attached the rafter sub-assembly in Step 7. Screw rafters to rafter sub-assembly at the top using 2 screws screwed in at an angle on each side of each rafter. Space rafters at 24" on center. See illustration below.

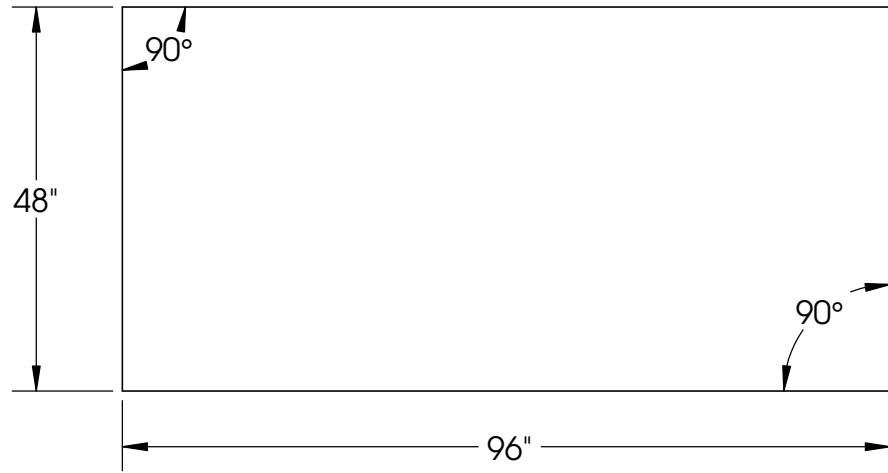


Attach the Eave Boards (Item # 14) to the gazebo base as shown below using 2 screws into each rafter. See illustration below.

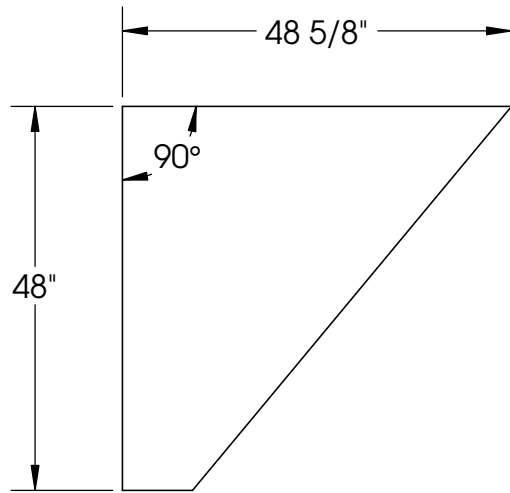


Item No. Material: 1/2" x 48" x 96" Plywood  
**15** Qty.:4

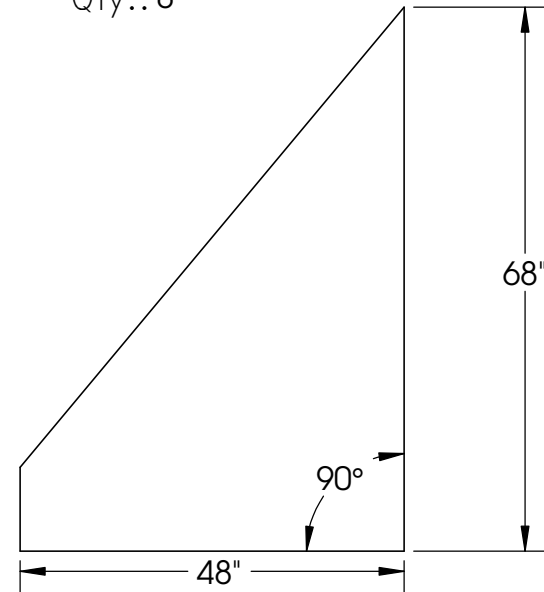
Cut the plywood for the roof sheeting as shown.  
See sheet layout on the next page for instructions  
on how to lay Items # 16 & 17 out on a 4 x 8 sheet.



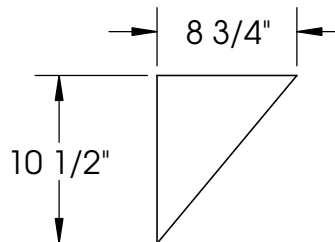
Item No. Material: 1/2" x 48" x 48-5/8" Plywood  
**16** Qty.:8

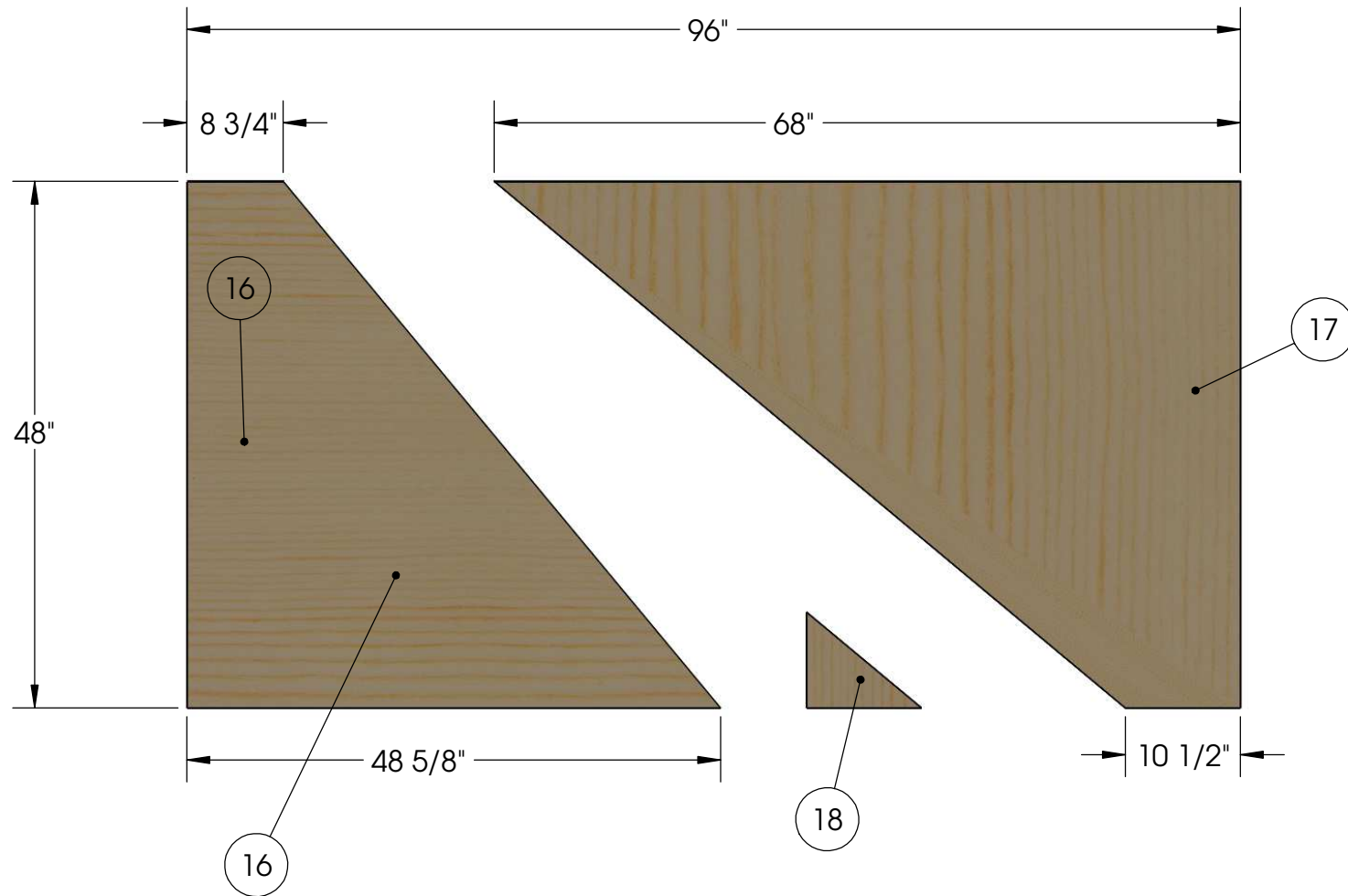


Item No. Material: 1/2" x 48" x 68" Plywood  
**17** Qty.:8

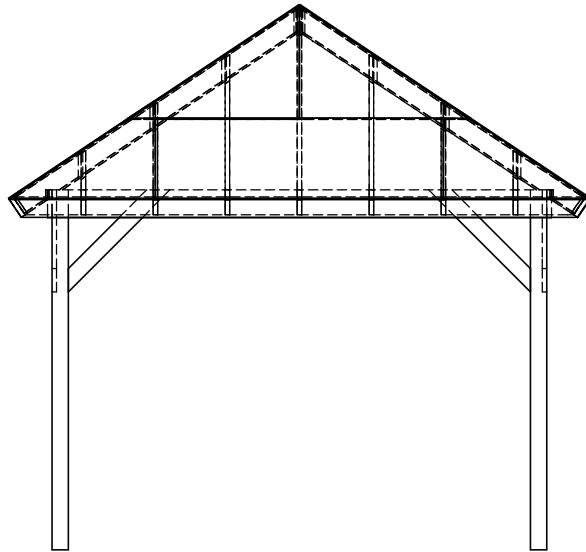
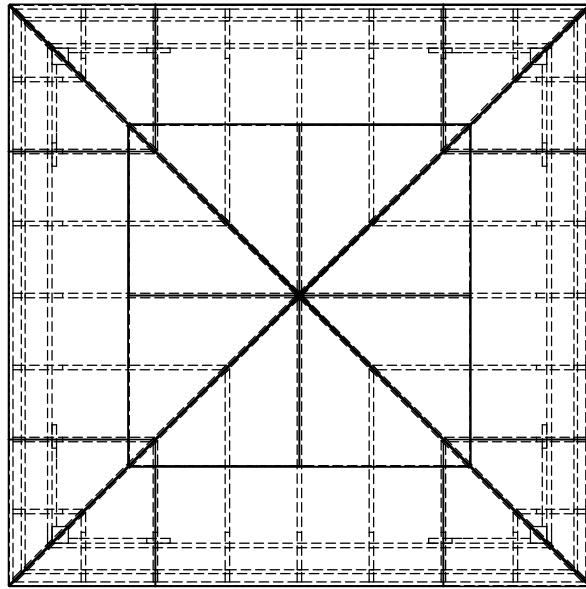


Item No. Material: 1/2" x 10-1/2" x 8-3/4" Plywood  
**18** Qty.:8

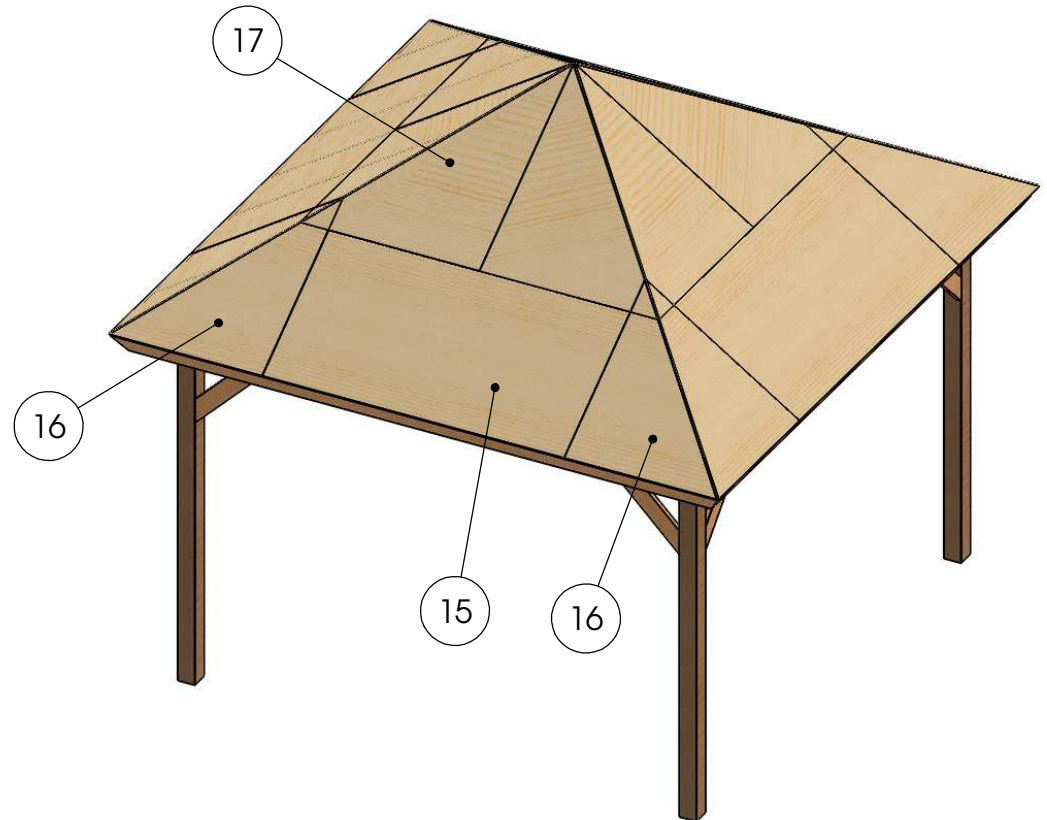








Attach plywood sheeting to the rafters as shown below using deck screws. Make sure that each seam is centered on a rafter.



Roll out roofing underlayment onto roof as shown below. Be sure to overlap the corners. Attach using staples. Then install drip edge per manufacturers instructions over the edge of the roof on all four sides.



Cover the roof with desired shingles being sure to follow shingle manufacturers instructions. Cover each corner with ridge cap. Finish the wood frame as desired and you are ready to start enjoying your gazebo.



**Item # 5 & 6 Birds Mouth Template**  
**Actual Size**  
**Cut notch shown and**  
**use to mark out rafters**

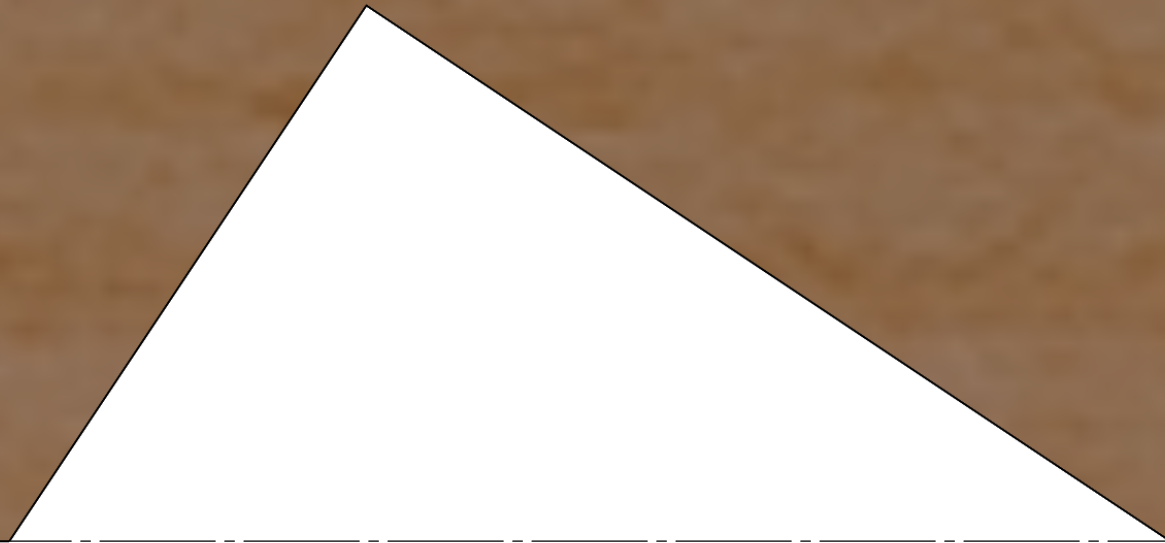


**Item # 5 & 6 Angle Template  
Actual Size  
Cut angle shown and  
use to mark out rafters**

**Top**

**Bottom**

**Item # 7-13 Birds Mouth Template**  
**Actual Size**  
**Cut notch shown and**  
**use to mark out rafters**





**Items # 7,8,9,10,&11 Template**  
**Actual Size**  
**Use to cut bird's mouth**



***Front View***

***Item # 7 Template  
Actual Size  
Cut angle shown and  
use to mark out rafters***



***Top View***



A large brown trapezoidal shape representing the front view of a component. It has a horizontal top edge, a horizontal bottom edge, a vertical left edge, and a diagonal right edge that slopes inward from top to bottom.

**Front View**

**Items # 8, 10, & 12**  
**Actual Size**  
**Cut angle shown and**  
**use to mark out cuts**

A light brown trapezoidal shape representing the top view of the component. It has a vertical left edge, a vertical right edge, a horizontal bottom edge, and a diagonal top edge that slopes inward from right to left.

**Top View**

The image contains two technical drawings of a tapered object. The 'Front View' on the left is a trapezoid with a dark brown fill and a diagonal line from the bottom-left to the top-right. The 'Top View' on the right is a vertical rectangle with a light brown fill and a diagonal line from the top-left to the bottom-right. The text 'Items # 9, 11, & 13 Actual Size Cut angle shown and use to mark out cuts' is located in the lower-left area of the front view.

**Front View**

**Top View**

**Items # 9, 11, & 13  
Actual Size  
Cut angle shown and  
use to mark out cuts**



**Front View**

**Top View**

**Item # 14**  
**Actual Size**  
**Cut angle shown and**  
**use to mark out cuts**

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