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Mini Gazebo

Since a traditional gazebo has eight sides and this one has only half as many, Mark suggested that the proper name for this project should either be a “Gaz” or an “Ebo”. What ever you call it, it is a pretty addition to any yard, and provides a quiet nook for reading, drinking lemonade, or just enjoying the day. The gazebo is easy to build if you take it one step at a time. It is built in sections from the ground up, beginning with the bottom frame.



Special Tools and Techniques

Miter
Level

Materials and Supplies

- 32 linear feet of 2 x 6 pine
- 4, 8' 4 x 4 pine posts
- 4 concrete footings
- 1 package shims
- 90 linear feet of 5/4 x 6 pine decking
- 34 linear feet of 2 x 4 pine
- 4' x 4' sheet of 1/4" plywood
- 4, 4' x 8' sheets of 1/2" plywood
- Shingles, enough to cover 75 square feet
- 14 linear feet of 1 x 4 pine
- 58 linear feet of 1 x 1 pine
- 3, 4' x 8' sheets of lattice

Hardware

- 100, 3-1/2" wood screws
- 16, 3-1/2" lag screws
- 120, 2-1/2" wood screws
- 220, 1-5/8" wood screws
- 70, 2" wood screws
- 500, 1" roofing nails
- 50, 2" (6d) finish nails
- 300, 1-1/4" (3d) finish nails

Cutting List

Code	Description	Qty.	Materials	Dimensions
A	Front/Back	2	2 x 6 pine	57-1/2" long
B	Sides	2	2 x 6 pine	60-1/2" long
C	Center Support	1	2 x 6 pine	57-1/2" long
D	Corner Post	4	4 x 4 pine posts	96" long
E	Floorboards	11	5/4 x 6 pine	60-1/2" long

F	Roof Supports	2	2 x 4 pine	85" long
G	Roof Rafter	2	2 x 4 pine	59" long
H	Rafter Connector	2	¼" plywood	See Figure
I	Rafter Brace	2	2 x 4 pine	58" long
J	Roof	4	½ plywood	47" x 74"
K	Peak Cover Sides	4	2 x 6 pine	16" long
L	Planter Outer Side	3	5/4 x 6 pine	58-3/4" long
M	Planter Inner Side	2	5/4 x 6 pine	54" long
N	Planter Middle	1	5/4 x 6 pine	49-3/4" long
O	Planter End	2	5/4 x 6 pine	5-1/2" long
P	Planter Bottom	3	1 x 4 pine	49-1/2" long
Q	Vertical Support	12	1 x 1 pine	32" long
R	Horizontal Support	6	1 x 1 pine	48" long
S	Trellis Panel	3	Lattice	32" x 49-1/2"

Building the Bottom Frame.

1. Cut two Back/Fronts (A) from 2 x 6 treated pine, each measuring 57-1/2 inches.
2. Cut two Sides (B) from 2 x 6 treated pine, each measuring 60-1/2 inches.
3. Place the two Back/Fronts (A) on a level surface, parallel to each other and 57-1/2 inches apart.
4. Place one Side (B) over the ends of the two Back/Fronts (A), as shown in *Figure 1*. Screw through the ends of the Side (B) into the Back/Fronts (A) using two 3-1/2" wood screws on each joint.
5. Cut one Center support (C) from 2 x 6 pine, measuring 57-1/2" long.
6. Place the Center Support (C) between the two Front/Backs (A), centered between the Sides (B) inside the bottom frame, as shown in *Figure 1*. Screw through the two Front/Backs (A) into the ends of the Center Support (C), using three 3-1/2" wood screws on each joint.

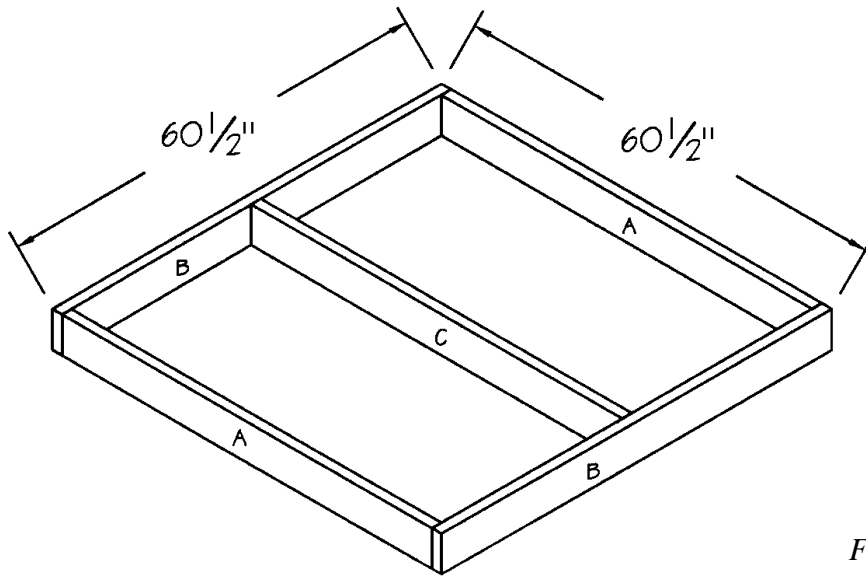


Figure 1

Adding the Posts

1. Place four concrete footings on the ground to form a square. The distance between the four outer corners of the post openings in the concrete footings should measure exactly 57-1/2 inches, as shown in *Figure 2*. When the footings are exactly square, the measurement between opposing corners should be exactly the same.

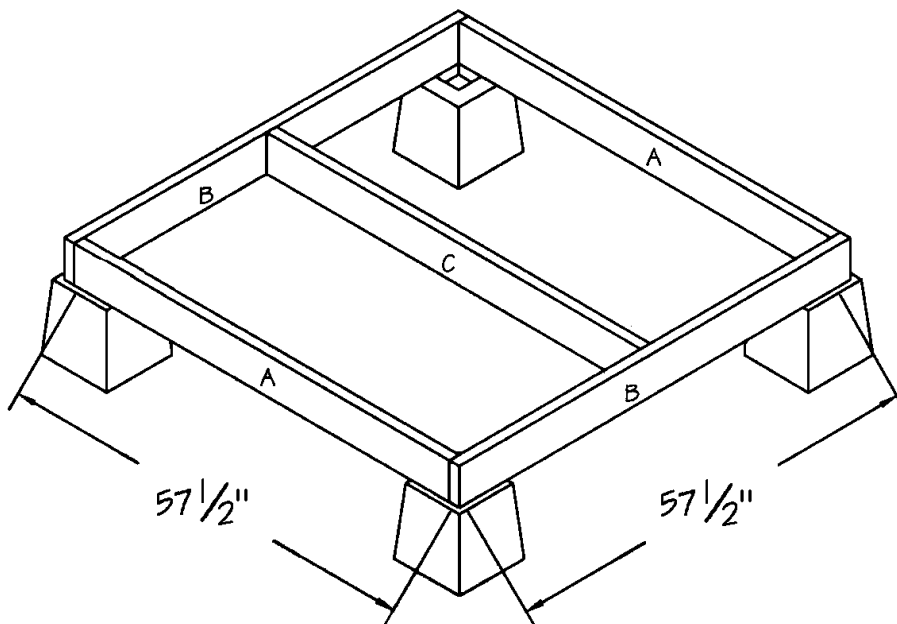


Figure 2

- Place the assembled bottom frame over the concrete footings as shown in *Figure 2*. To level the bottom frame, it is a good idea to enlist the assistance of a helper. Beginning at the highest corner, level each of the remaining three corners, working in rotation around the bottom frame. Use shims to level the frame. Insert the thin end of the shim underneath the Corner Post (D) until that edge of the Corner Post (D) is level.

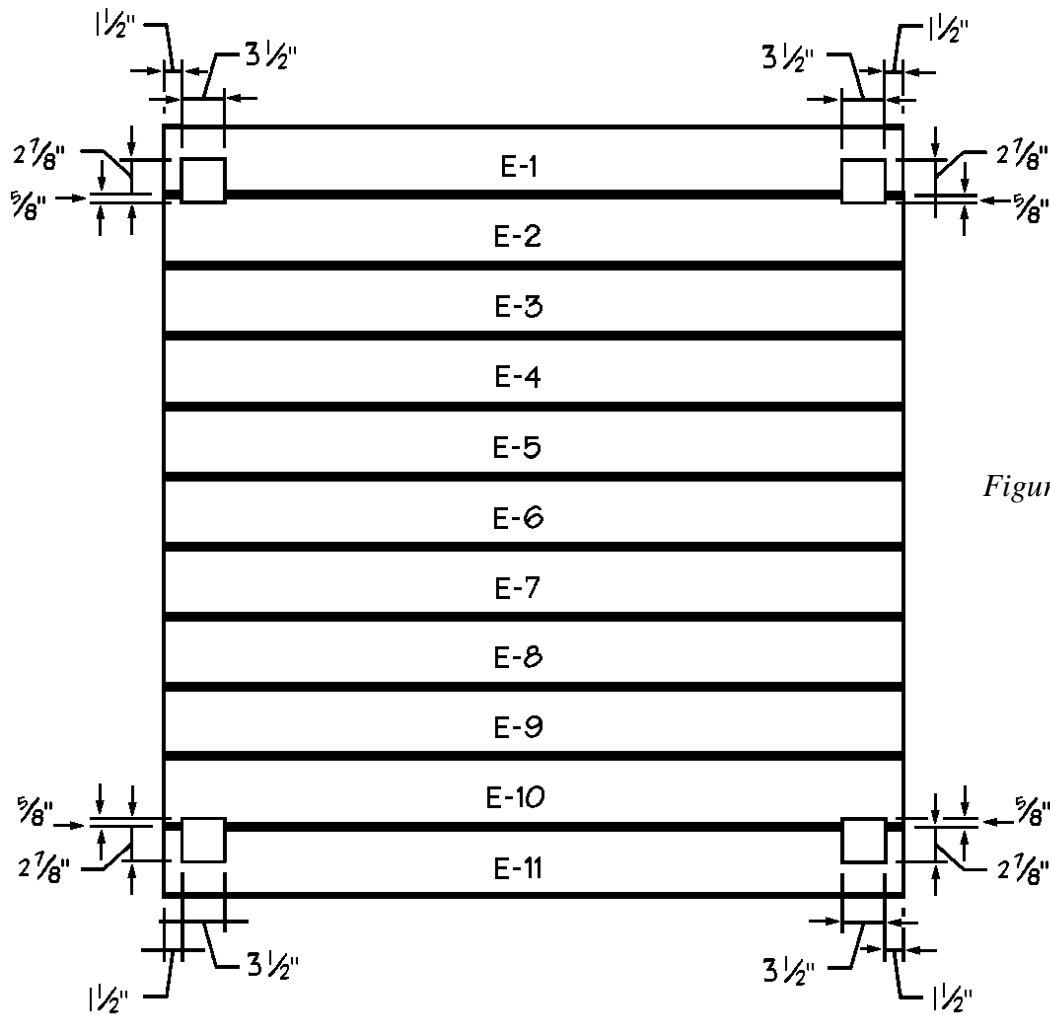


Figure 3

- Cut about 1 inch off the end of the four Corner Posts (D) so that one end of each Corner Post (D) is square.
- When you are satisfied that the bottom frame is exactly level and square, insert a Corner Post (D) inside the bottom frame (squared end down) on one corner of the structure. Use a level vertically to make certain that the Corner Post (D) is plumb. Temporarily hold the post in place by screwing through the bottom frame into the Corner Post (D), using two 3-1/2"

wood screws (one on each side of the post).

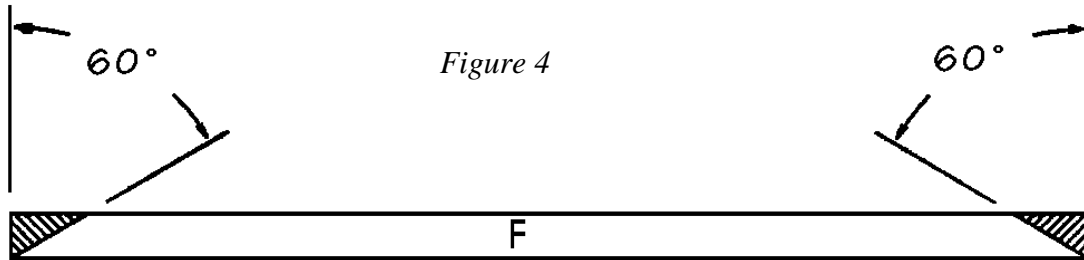
5. Repeat Steps 3 and 4 three times to add the remaining three Corner Posts (D) to the structure
6. Recheck the level and squareness of the structure, and when it is perfect, pre-drill holes and insert a 3-1/2" lag screw through the bottom frame into each side of each Corner Post (D).

Adding the Floor Boards

1. Cut 11 Floorboards (E) from 5/4 x 6 decking, each measuring 60-1/2 inches.
2. Since the floorboards (E) must be cut to fit around the corner Posts (D), follow the cutout measurements and the placement sequence, as shown in *Figure 3* to add the Floorboards (E) to the structure. Cut and place one Floorboard (E) at a time, beginning with number 1 and ending with number 11. Because of variations in lumber sizes, it may be necessary to re-trim some of the Floorboards (E). Make certain that each of your floorboards (E) fits correctly before cutting the next one. The Floorboards (E) will overhang the Front/Back (A) and Sides (B) by 1-3/4" inches. Screw through each Floorboard (E) into the Sides (B) and Center Support (C), using two 2-1/2-inch wood screws on each joint.

Adding the Top Frame

3. Repeat the section Building the Bottom Frame (Steps 1 through 5) to assemble a top frame that is identical to the bottom frame. To make certain that the top and bottom frames are identical, we suggest that you assemble the top frame around the existing posts on top of the floorboards (E).
4. You will need a trusty helper for this step. Mark the desired height of the lower edge of the top frame on each of the four Corner Posts (D). We attached ours 6-1/2 feet above the floorboards (E). Raise the top frame to the height desired, and make certain it is level on all four Sides. We used an extra board to prop it in place until we had it leveled and could secure it.
5. When you are satisfied that the top frame and all four posts are exactly level and square, hold the assembly in place temporarily by screwing through the Front/Backs (A) and Sides (B) into the Corner Post (D) using one 3-1/2" wood screw. To hold it securely, pre-drill holes and insert one 3-1/2" lag screw through each Front/Back (A) and Side (B) into the each Corner Post (D).
6. Cut off the top of each of the Corner Posts (D) flush with the upper edge of the top frame.



Adding the Rafters

1. Cut two Roof Supports (F) from 2 x 4 pine, each measuring 85 inches.
2. Miter each end of both Roof Supports (F) at opposing 60-degree angles, as shown in *Figure 4*.
3. The two Roof Supports (F) fit together by means of a slot system (see *Figure 5*). Cut a notch measuring 1-1/2 inches wide and 1-3/4 inches deep in the exact center of both Roof Supports (F). Make certain that you make these cuts very carefully (watching the direction of your mitered ends), or the Roof Supports (F) will not fit together correctly. The two Roof Supports (F) will be joined in a later step.

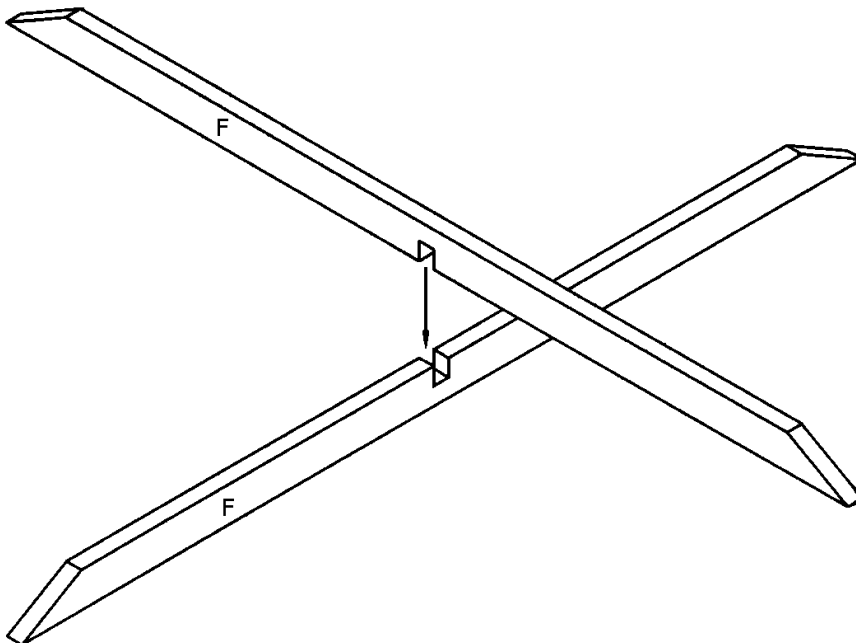
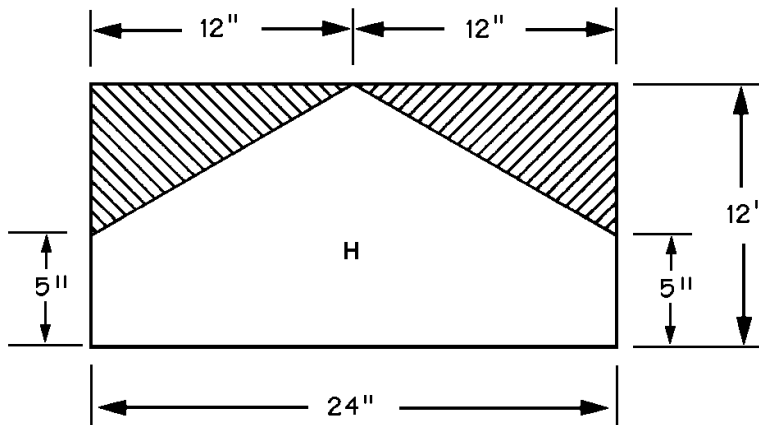


Figure 5

4. Cut two Roof Rafters (G) from 2 x 4 pine, each measuring 59 inches.
5. Miter one end of each Roof Rafter (G) at a 30-degree angle, as shown in *Figure 6*.



6. Cut two Rafter Connectors (H) from 1/4" plywood, following the measurements given in *Figure 7*.
7. Place two Roof Rafters (G), mitered ends together, on a level surface. Place one Rafter Connector (H) over the mitered joint, as shown in *Figure 8*. Apply glue to the meeting surfaces, and screw through the Rafter Connector (H) into both Roof Rafters (G), using 1-5/8-inch wood screws spaced every 3 inches.



8. Turn the assembly over and attach the remaining Rafter Connector (H) to the opposite side of the two Roof Rafters (G).

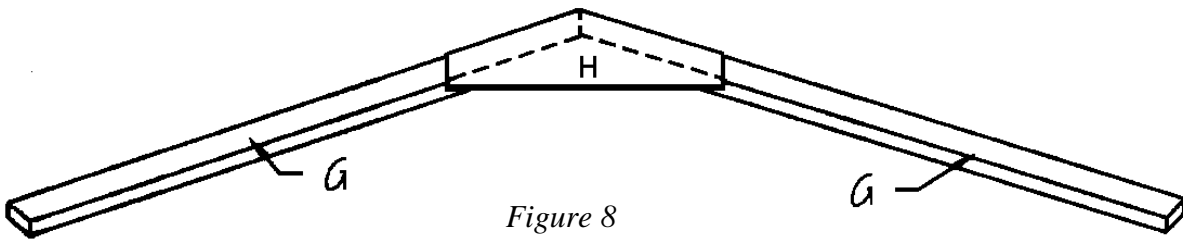
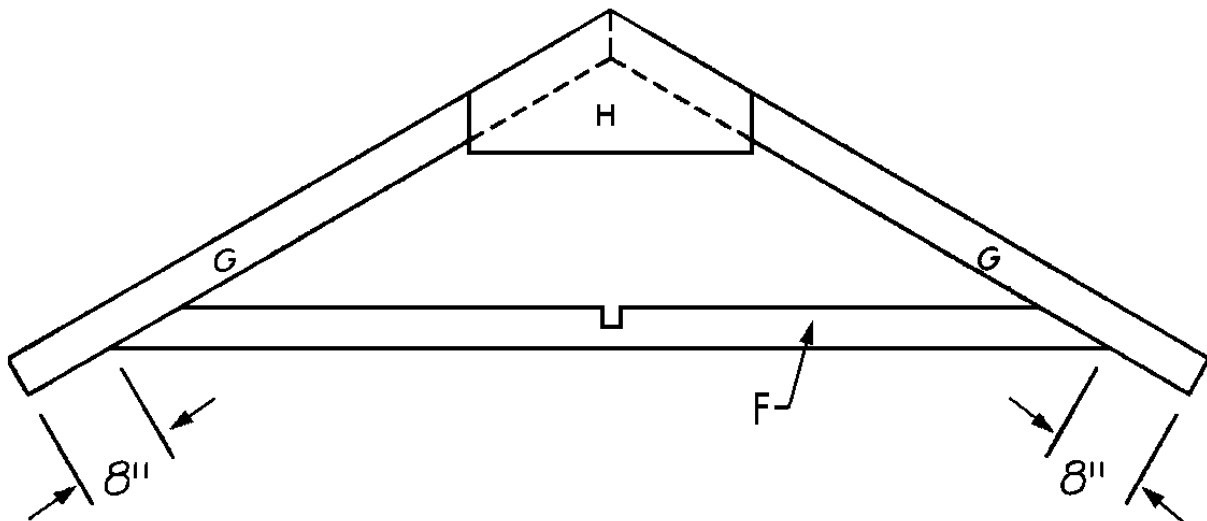


Figure 8

9. Fit the Roof Support (F) between the ends of the Roof Rafters (G), as shown in *Figure 9*. Apply glue to the meeting surfaces, and screw through the ends of the Roof Support (F) into the Roof Rafters (G), using two 3-1/2" wood screws on each joint.



10. Apply glue to the inner edges of the notches, then fit the slots in the two Roof Supports (F) together so that the Roof Supports (F) form an X shape as shown in *Figure 10*. Screw through the top Roof Support (F) into the notch, using a 2-inch wood screw.
11. Cut two Rafter Braces (I) from 2 x 4 pine, each measuring 58 inches.
12. Miter one end of each Rafter Brace (I) at a 30-degree angle, as shown in *Figure 6*.
13. Install the Rafter Braces (I), mitered end against the Rafter Connector (H) and perpendicular to the Roof Rafters (G), as shown in *Figure 11*. Screw through the Rafter Braces (I) and the Rafter Connector (H) and into the Roof Rafters (G), using two 3-1/2" wood screws. Attach the other end of the Rafter Braces (I) to the free ends of the Roof Supports (F). Screw

through the Roof Supports (F) into the Rafter Braces (I), using two 2-1/2" wood screws.

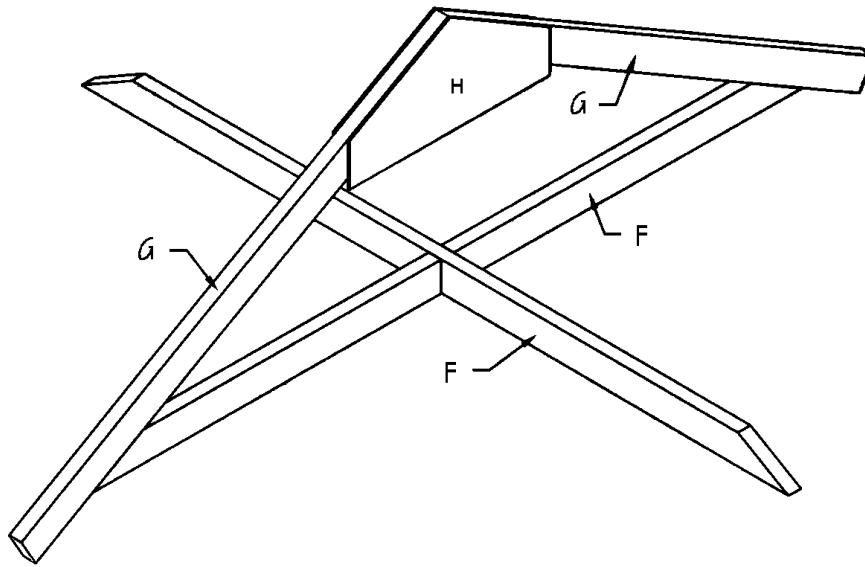


Figure 10

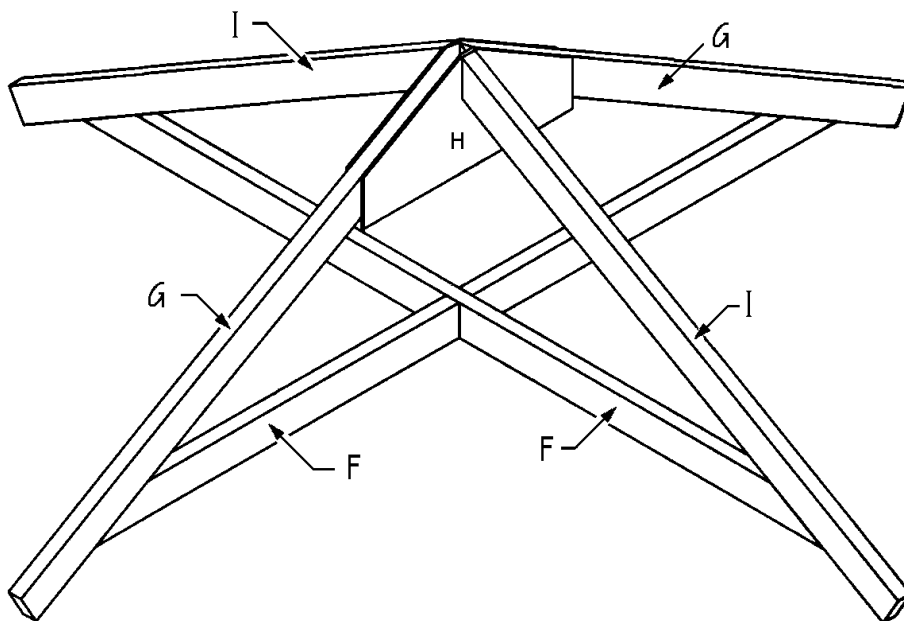


Figure 11

14. Now it is time for the scaffolding. Place the entire roof support structure on top of the posts and top frame. The Roof Supports (F) should be centered over each of the four posts. Screw at an angle through the Roof Supports (F) into the Corner Post (D), using one 3-1/2" wood screw on each side of the Roof Support (F). If you are building this project in an area that receives high winds, we suggest that you add metal straps over each of the Roof Supports (F).

Adding the Roof

1. Cut four Roofs (J) from $\frac{1}{2}$ plywood, following the dimensions given in *Figure 12*.

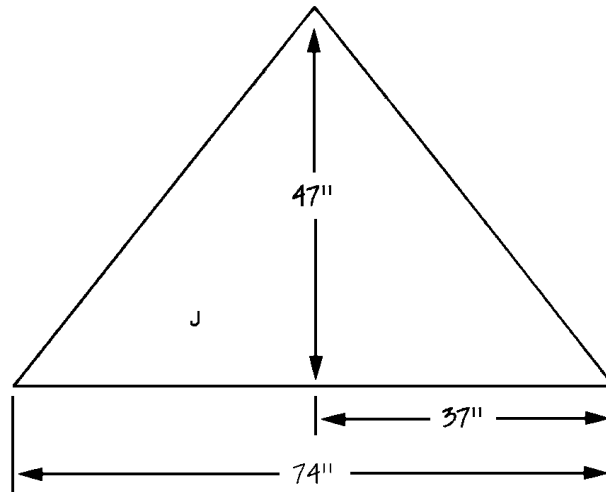


Figure 12

2. Place each of the Roofs (J) over the roof support assembly, working in rotation around the structure. Screw through the edges of each of the Roofs (J), using 1-5/8" wood screws spaced every 5 inches. (This roof assembly does not have to look perfect, as it will be covered with shingles.)

Adding the Shingles

1. We used six rows of shingles to cover each side of the gazebo. On the top two rows, we trimmed regular-size shingles to the appropriate length, so they did not extend past the roof peak. It is better to work with the top portion of the original shingle, since it is thinner than the bottom edge. It is not difficult to shingle, and since the finished project should look somewhat rustic, this job is even easier. Begin attaching the first row of shingles with 1-inch roofing nails, just overlapping the bottom edge of one Roof (J). Each shingle should be nailed twice to prevent shifting. Choose random widths of shingles as you work. Continue the row across the bottom edge.
2. Next, add a second row, overlapping the first row by about 6 inches higher. Continue adding rows, about 6 inches apart, until you reach the roof peak. It is helpful to mark each row with a pencil, using a long level to keep your rows level and straight.
3. Trim off the shingle excess on each side and on the peak. Repeat the application of shingles on the remaining three Roofs (J). The row placement on each Roof (J) should match the

height of the ones on the First Roof (J).

4. To cover the roof ridges, cut the shingles to 2 inches wide, and attach the resulting narrow shingles to both sides of each of the four roof ridges, working from the bottom up. Trim the last shingles, so they do not extend past the roof ridges or peak.

Adding the Peak Cover

1. Cut four Peak Cover Sides (K) from 2 x 6 pine, each measuring 16 inches.
2. Miter each end of the four Peak Cover Sides (K) at opposing 45-degree angles, as shown in *Figure 13*.

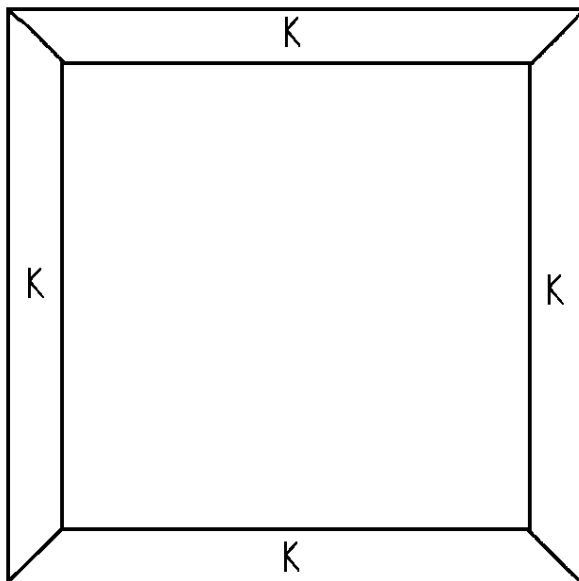


Figure 13

3. Position two Peak Cover Sides (K) on a level surface, parallel to each other and 13 inches apart, with miters facing each other. Fit the remaining two Peak Cover Sides (K) between the first two, matching miters, to form a 16-inch square. Apply glue to the meeting surfaces, and screw through each side of all four corners, using two 2-1/2" wood screws on each joint.
4. Place the assembled peak cover over the roof peak. Center and level the peak cover on all four sides. Secure the peak cover to the roof by screwing at an angle through the peak cover into the roof, at least once on each of the four sides of the roof, using 3-1/2" wood screws.

Adding the Planter Boxes.

1. Cut three Planter Outer Sides (L), from 5/4 x 6 deck boards, each measuring 58-3/4 inches.
2. Cut two Planter Inner Sides (M) from 5/4 x 6 deck boards, each measuring 54 inches.
3. Cut one Planter Middle (N) from 5/4 x 6 deck boards, measuring 49-3/4 inches.
4. Cut two Planter Ends (O) from 5/4 x 6 deck boards, each measuring 5-1/2 inches.
5. The planter boxes are built around the four Corner Posts (D). Measure and mark each of the four Corner Posts (D) at a height of 32 inches above the Floorboards (E). Each of the six planter pieces (L, M, N, and O) is mitered on both ends. The ends of the three Planter Outer Sides (L), Planter Middle (N), and Planter Ends (O) are mitered at opposing 45-degree angles. The two Planter Inner Sides (M) are mitered at the same 45-degree angle. Refer to *Figure 13* to be certain that your 45-degree miter is cut properly.
6. Measure your structure carefully and work in rotation around the Corner Posts (D). First add the three Planter Outer Sides (L), one at a time. Then add one Planter Inner Side (M), then the Planter Middle (N), the remaining Inner Side (M), and finally the Planter Ends (O). Apply glue to the meeting surfaces, and use two 2-1/2" wood screws on each joint.
7. Cut three Planter Bottoms (P) from 1 x 4 pine, each measuring 49-1/2 inches.
8. Insert one Planter Bottom (P) flush with the bottom edge of the Outer and Inner Planter Sides (L and M). Nail through the Outer and Inner Planter Sides (L and M) into the edges of the Planter Bottom (P), using 2-inch finish nails spaced every 5 inches.
9. Repeat Step 8 to add the remaining Planter Bottoms (P) to the opposite side and back of the structure.

Adding the Trellis

1. Cut 12 Vertical Supports (Q) from 1 x 1 pine, each measuring 32 inches.
2. Cut six Horizontal Supports (R) from 1 x 1 pine, each measuring 48 inches. Attach one of the Vertical supports (Q) under the planter to the inside of one Corner Post (D), 3/4 inch from the edge, as shown in Figure 14. Apply glue to the meeting surfaces, and nail through the Vertical support (Q) into the face of the Corner Post (D), using 1-1/4" finish nails spaced every 4 inches.

3. Repeat Step 2 five items to attach the remaining Vertical Supports (Q) to the remaining three Corner Posts (D).

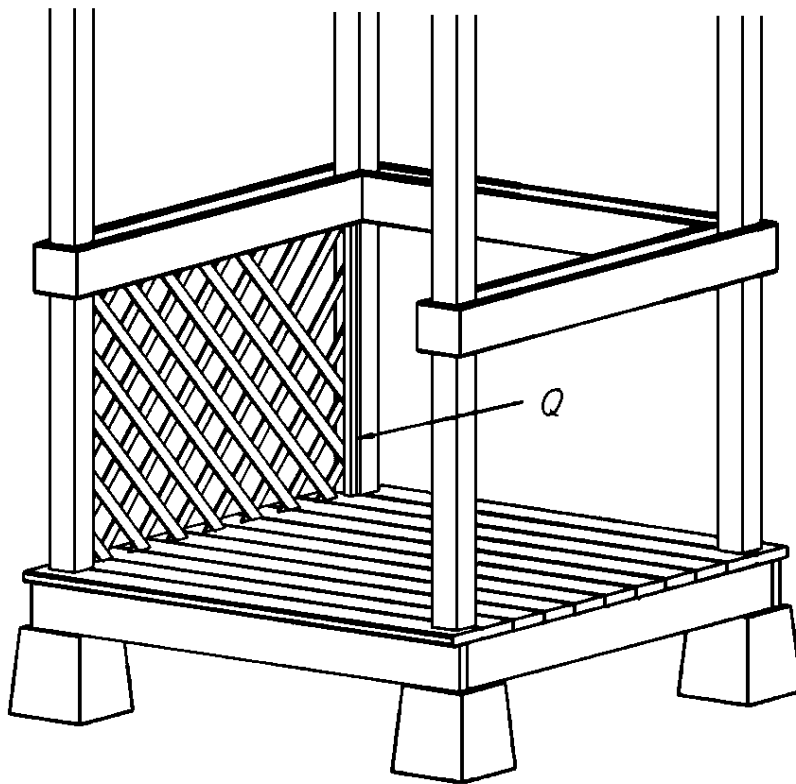


Figure 14

4. Attach one of the Horizontal Supports (R) to one Planter Bottom (P), between the two Vertical Supports (Q), again $\frac{3}{4}$ inch in from the edge. Apply glue to the meeting surfaces and nail through the Horizontal Support (R) into the face of the Planter Bottom (P), using 1-1/4" finish nails spaced every 4 inches.
5. Repeat Step 4 twice to attach the remaining Horizontal Supports (R) to the two remaining Planter Bottoms (P).
6. Cut three Trellis Panels (S) from lattice, each measuring 32 x 49-1/2 inches.
7. Place one Trellis Panel (S) over the Horizontal and Vertical supports (Q and R), as shown in Figure 13.
8. Nail through the Trellis Panel (S) into the Horizontal and Vertical Supports (Q and R), using 1-1/4" finish nails spaced 6 inches apart.

9. Repeat Step 8 twice to add the remaining two Trellis Panels (S) under the Planter Bottoms (P).
10. Repeat Steps 3 through 6 to add one Horizontal and two Vertical Supports (Q and R) on the opposite side of each Trellis Panel (S). Horizontal supports have not been added to the bottom of the lattice, to make it easier to hose debris off the completed structure.

Finishing

1. We backfilled with extra dirt around the gazebo, then added sod over the dirt to hold it in place.
2. Sand off any rough edges on the structure
3. Paint or stain the gazebo the color of your choice, or leave it the natural wood color.



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