

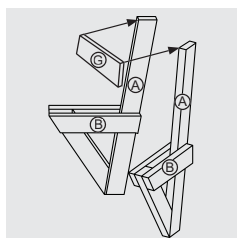
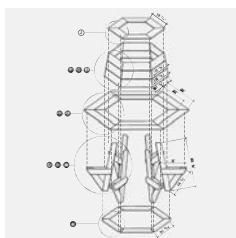
HEXAGONAL CEDAR BENCH

CONSTRUCTION PLAN



Difficulty level: TTT | DIFFICULT

Completion time: 12 hours



HEXAGONAL CEDAR BENCH

A cedar bench designed around nature!

How original, a comfy bench built around a tree in the centre of the garden. Natural shade guaranteed!

Made from cedar, the bench is 70" in diameter and 36" in height. This project is for do-it-yourselfers experienced in using cutting tools. That's because each part has to be cut at a different angle, and each angle is calculated very precisely. Once the parts have been cut, the bench is easy to assemble.

Cedar is the idea material for outdoor construction projects. This bench is weather resistant and will provide a cosy seating area for your family and friends for years to come.



TOOLS AND MATERIALS NEEDED

TOOLS

- > Table saw or sliding mitre saw
- > Pencil
- > Screwdriver-drill (electric or cordless)
- > Measuring tape

MATERIALS

- > 12 pieces, 2" x 4" x 96"
- > 12 boards, 1" x 6" x 96"
- > 2 1/2" treated-wood screws
- > 3" treated-wood screws

BEFORE ASSEMBLY

CUTTING LIST

Mark each piece clearly with the corresponding letter before assembling. After cutting the pieces, sand the edges smooth as necessary.

Pieces, 2" x 4" x 96"

PIECES	QUANTITY	LENGTH (")	ANGLE (°)
A LEG	6	36 1/2	2 - 10° angles
B LEG	12	17	1 - 10° angle and 1 - 32° angle
C LEG	6	19 3/4	1 - 48° angle and 1 - 32° angle
D BASE	6	21 7/16	2 - 30° angles

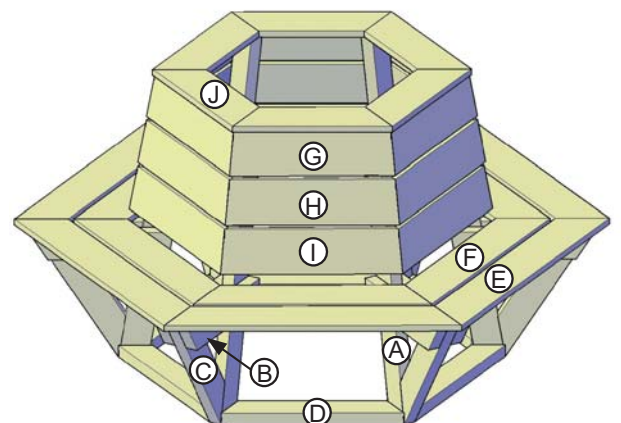
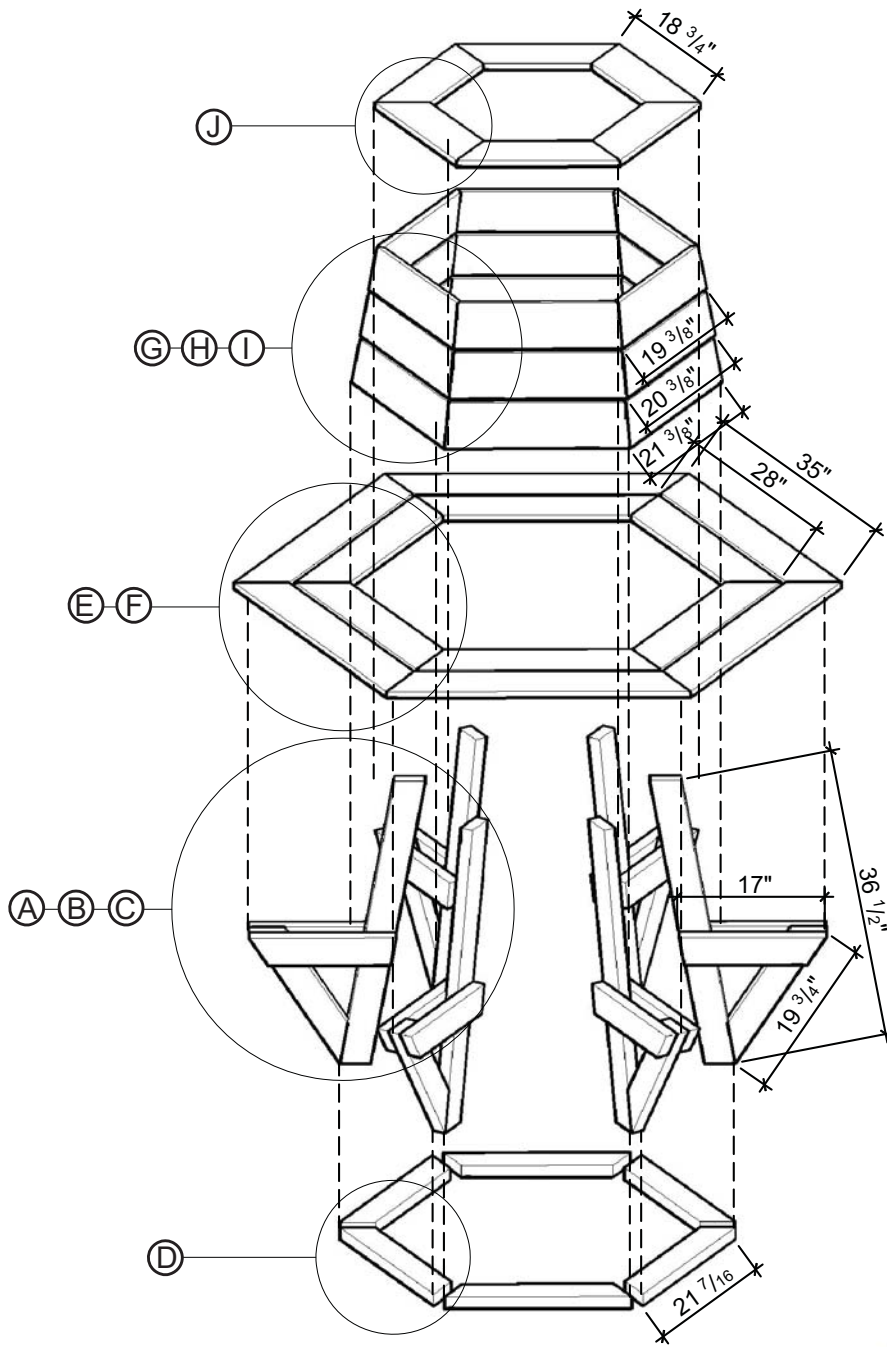
Boards, 1" x 6" x 96"

PIECES	QUANTITY	LENGTH (")	ANGLE (°)
E SEAT	6	35	2 - 30° angles
F SEAT	6	28	2 - 30° angles
G BACK	6	19 3/8	2 - 5° angles and 2 - 30° angles
H BACK	6	20 3/8	2 - 5° angles and 2 - 30° angles
I BACK	6	21 3/8	2 - 5° angles and 2 - 30° angles
J TOP	6	18 3/4	2 - 30° angles

Note: All the parts must be cut at precise angles, which can be done with a table saw or sliding mitre saw.

HEXAGONAL CEDAR BENCH

OVERVIEW

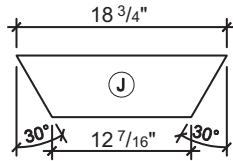


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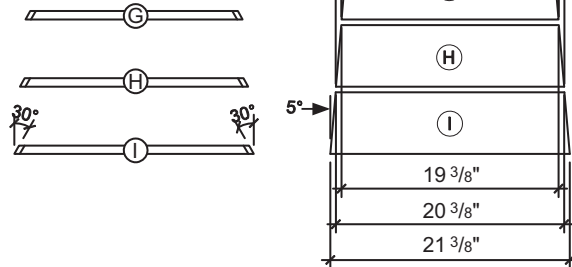
PREPARATION

Cut the parts according to the following instructions.

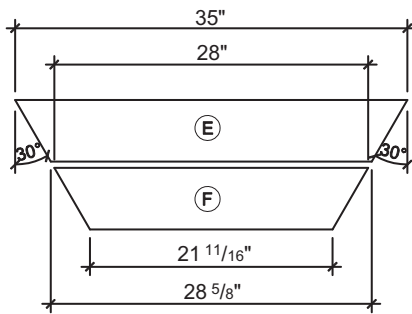
Top



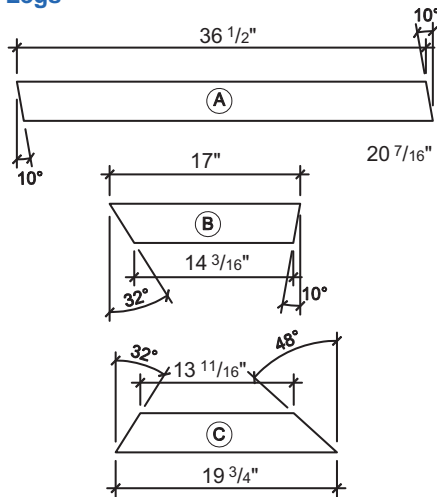
Back



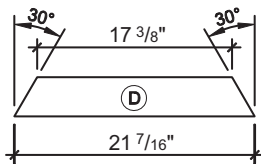
Seat



Legs



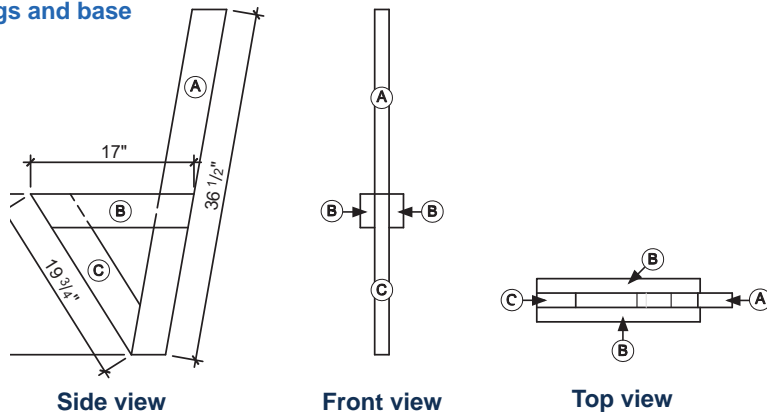
Base



ASSEMBLY

The boards for the seats, backs and top are fastened with 2 1/2" screws.
The leg and base parts are fastened with 3" screws.

Legs and base



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ASSEMBLY (CONT'D)

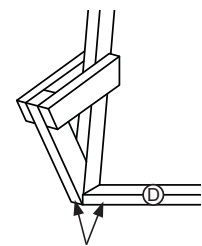
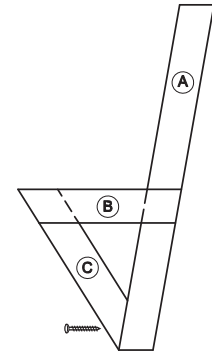
- 1 Align the most pointed end of part C (48° angle) with the bottom end of part A, as illustrated, then screw in place.
- 2 This assembly is “sandwiched” between two parts B: align the ends of one part B with the edges of parts C and A, and screw in place. The 32° angle of part B must be position at the front. Fasten another part B to the other side of parts C and A in the same way.
- 3 Build five other legs in the same way, to make 6 in all.
- 4 Screw bases D to the legs. The angle of D must be pointing towards the inside, and the bottom edge of D must be flush with the bottom edge of the leg. Once all the bases D are installed, you will have a hexagon. Get someone to help you by holding the legs until the base is completely assembled and the structure can stand up by itself.

Important: Carry out all these steps directly where you want the bench to go, around the tree!

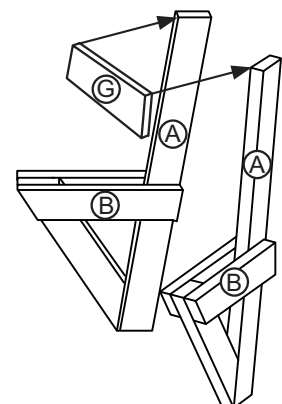
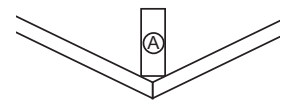
Seats, backs and top

Note: The angled ends of the boards forming each seat back will join up at the centre of parts A.

- 5 Align the top edge of one back part G with the top ends of two parts A, then position another part G on the left or right to check correct positioning. The ends of the two parts G must touch each other at the centre of A. Screw in place. Install the other back parts G in the same way.
- 6 Position the seat parts E and F on the horizontal parts of the legs (B) so that the ends of all the parts of a same letter touch each other and form a hexagon. Install parts E at the front of the seat and parts F at the back, resting on legs A. Make sure all pieces are equally spaced. Screw the boards tightly into the leg supports B.
- 7 Position a back part H about 1" under a part G and adjust it until its two ends are aligned with the centres of A. Place another part H to the left or right of the first to check correct positioning. The ends of the two parts H must touch each other at the centre of A. Screw in place. Install the other back parts H. Then install back parts I in the same way, about 1" under H.
- 8 Place tops J onto the ends of parts A, so that the ends of all the parts J touch each other to form a hexagon. Screw into place.



Bottom edges



The bench is now complete! Instead of building the bench around a tree, you might prefer to fit a shelf on the inside to hold a planter or flower pot, or you could even install a shelf with a hole in it, to let the tree trunk through and allow you to place plants around it.