



Mindbender Puzzle

This easy-to-make toy will provide hours of fun for children & adults alike.

This intriguing puzzle functions equally well as a child's toy or as an adult conversation piece. Its smooth, geometric surfaces and attractive woods make it pleasing to the touch and to the eye.

We built our puzzle from walnut and maple, chosen for their hardness and contrasting beauty, but other hardwoods work just as well. If you use other hardwoods, we recommend you choose woods with contrasting colors.

Cutting the pieces

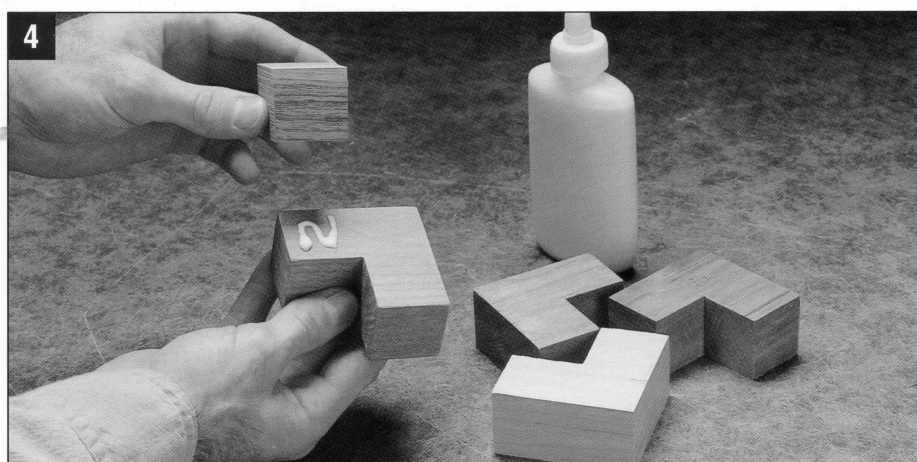
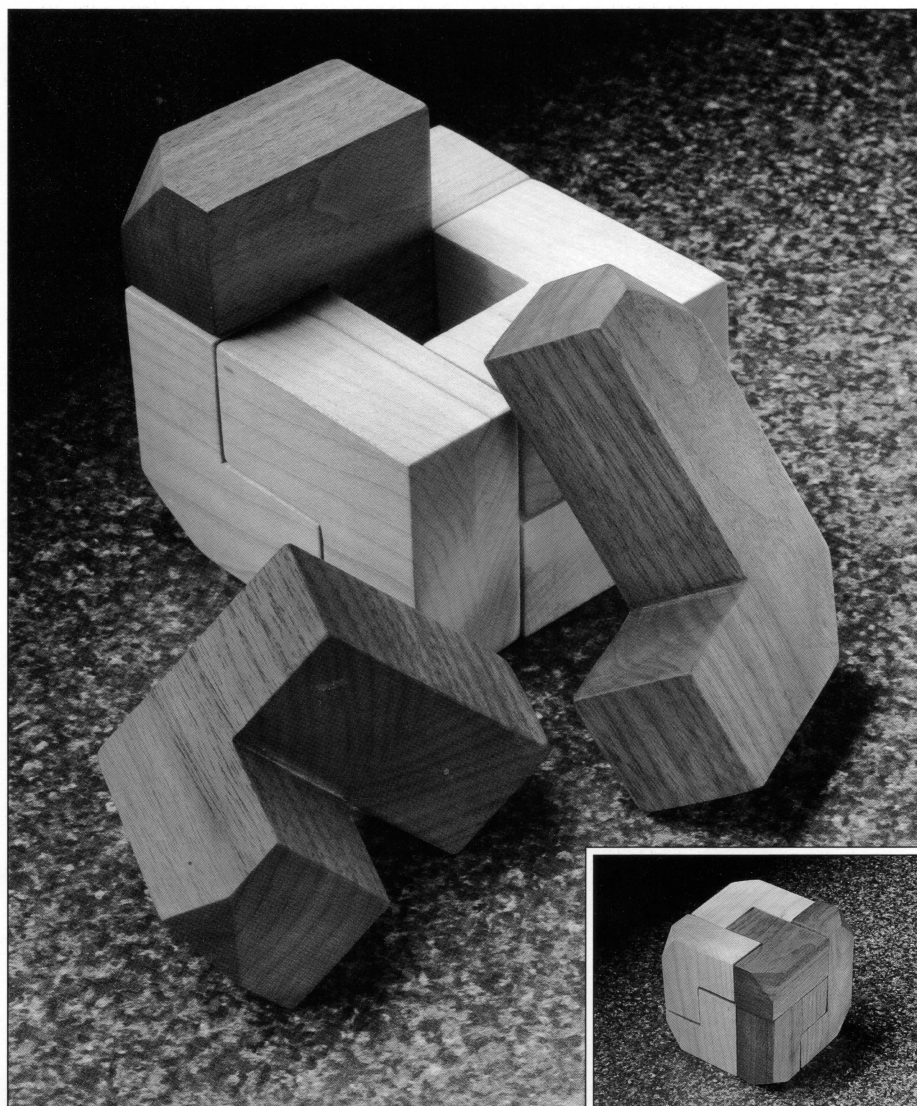
To cut the pieces for the puzzle, you'll need 1½" walnut and maple stock. The irregular, three-dimensional pieces (2, 6) will be made by gluing two 1½"-thick pieces together. If you don't have 1½" stock handy, you can glue up ¾" wood, then plane the glued-up stock down to 1½".

The key to making a good puzzle is the careful attention to detail. The pieces must fit together snugly to form their interlocking shape.

1 On 1½"-thick walnut, lay out piece 1, pieces 3 and 7, and an extra piece identical to these two that will be used to make part 6. Lay out one 1½" walnut square.

2 On 1½"-thick maple, lay out parts 4, 5, 8, and an extra, identical piece (the fourth piece will be used to make part 2). Lay out one 1½" maple square.

3 Cut out all the puzzle pieces using a bandsaw with a ½"-wide blade.



4 Glue the walnut cube to one of the L-shaped walnut pieces. Glue the maple cube to one of the L-shaped maple pieces, as shown in the *Diagram*. Clamp the glued pieces together until the glue dries.

5 Sand all pieces with a hand-sanding block, until all surfaces are smooth to the touch. Take care not to round over or change the dimensions of any of the pieces.
6 Assemble the puzzle parts (see *Solving the puzzle*, page 14).

CUTTING LIST

Key	Qty.	Description & Size
1	1	Bottom corner, walnut $1\frac{1}{4} \times 2\frac{1}{2} \times 3\frac{3}{4}$ "
2	1	Bottom corner, maple $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
3	1	Bottom corner, walnut $1\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
4	1	Top piece, maple $1\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
5	1	Top corner, maple $1\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
6	1	Top corner, walnut $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
7	1	Corner, walnut $1\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "
8	1	Top corner, maple $1\frac{1}{4} \times 2\frac{1}{2} \times 2\frac{1}{2}$ "

Note: listed sizes are the overall outside dimensions.

Misc.: glue, sandpaper.



7 Tape the pieces tightly together. Carefully sand off a $\frac{1}{2}$ " triangle from each corner of the taped puzzle, using a belt sander.

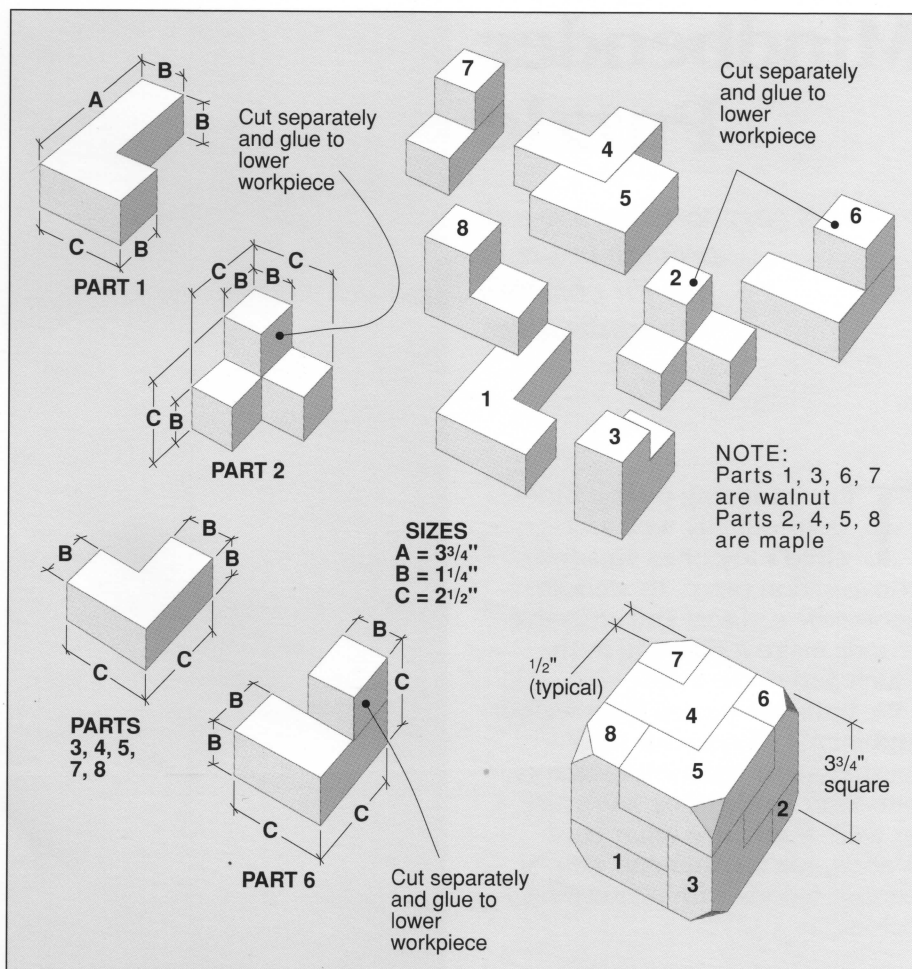
8 Untape the pieces, then vacuum them clean and wipe away all sawdust with a tack cloth or a rag soaked in mineral spirits.

Finishing the puzzle

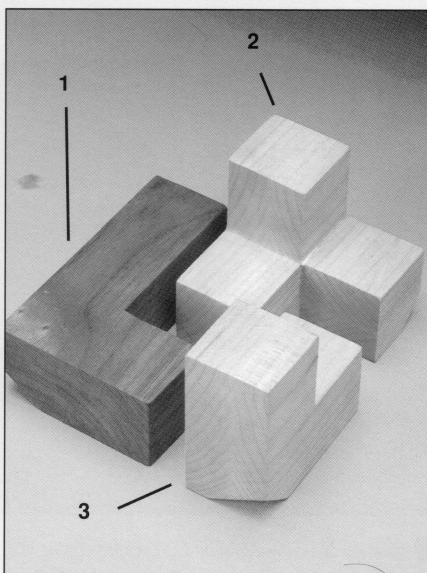
Polyurethane is a good choice for finishing your puzzle, because it forms a resilient surface that stands up to hard use while letting the beauty of the wood show through.

1 Apply a light, even coat of satin polyurethane finish to each puzzle piece. Let the finish dry completely.

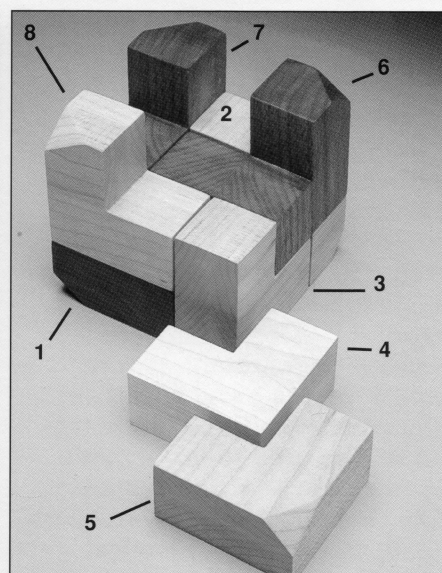
2 Apply two additional coats of polyurethane, sanding lightly with 320-grit sandpaper and wiping the surfaces clean between coats.



SOLVING THE PUZZLE



1 Assemble the bottom layer by arranging parts 1, 2, and 3, as shown.



2 Set parts 8 and 7 over part 1. Set part 6 over parts 2 and 3. Finish the puzzle by setting parts 4 and 5 in the remaining spaces.

PROVIDE COPY OF SOLUTION WITH EACH PUZZLE