

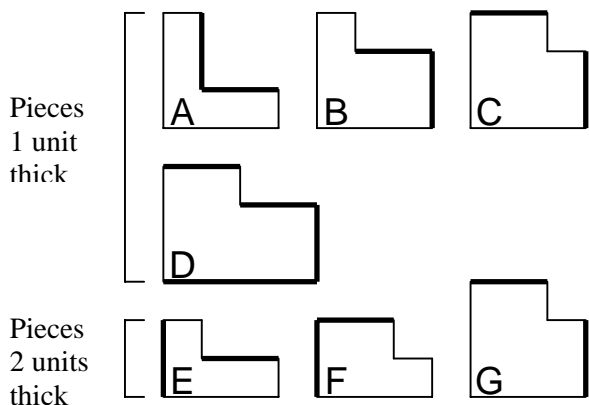
Seven L-ements

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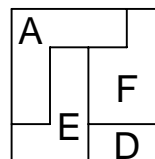
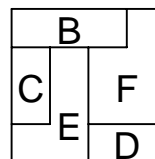
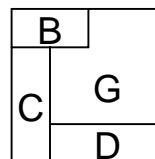
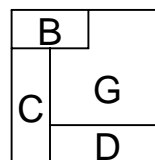
Objective: Make a cube with the 7 pieces
 Puzzle type: 3D put together
 Description: 7 L-shaped pieces form a cube
 Material: Maple
 Cube dimension: 6.4 cm on a side
 Designed and made by: Rick Eason

The Pieces

Light lines are 1 or 3 units long
 Heavy lines are 2 or 4 units long



There is only one solution:



A few solution hints:

- Hint 0) The puzzle is based on a 4x4x4 cube (no-brainer hint).
- Hint 1) The cube has 8 corner cells. There are only 7 pieces, and only one of these, piece D, is long enough to fill two corner cells. Therefore, each piece must "claim" one corner cell, except piece D claims two.
- Hint 2) The cube has 8 center (internal) cells. If each piece must fill some corner cell, only the three fat pieces (E, F, G) can contribute to (fill) the 8 center cells. Furthermore, each of these pieces must contribute the most cells it can to the center cells. Therefore build the center cells first using E, F and G. This can be done in relatively few ways.
- Hint 3) Obviously E and F contribute a 4x4x1 block of the center cells and they can do this in four different ways. Build the lower four center cells first using E and F and then try to fill the lowest level edge cells. Two E/F arrangements have obvious problems (too many edges and not enough nearby corners).