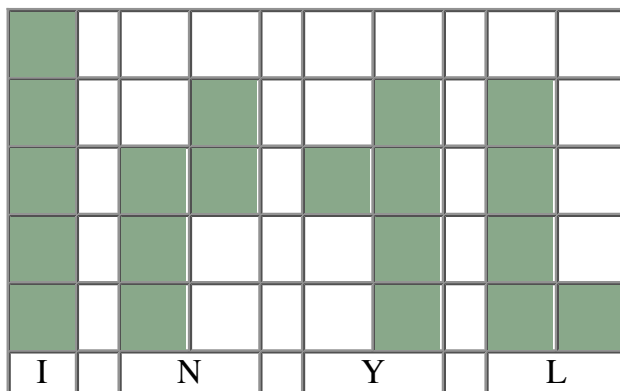
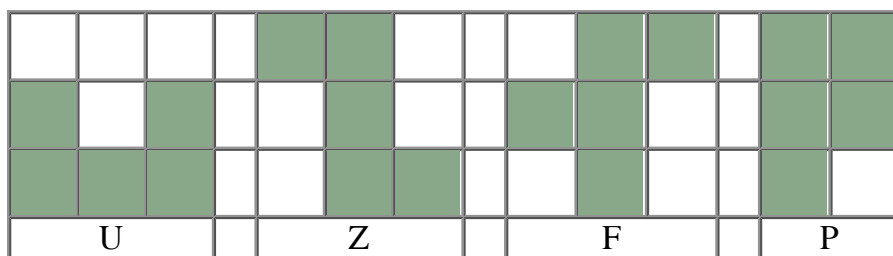
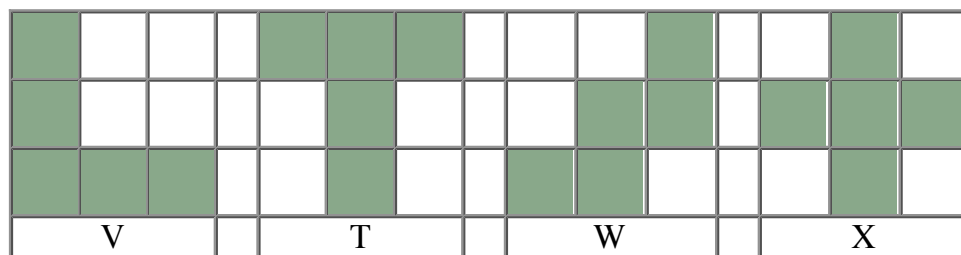




Information on Pentomino Puzzles

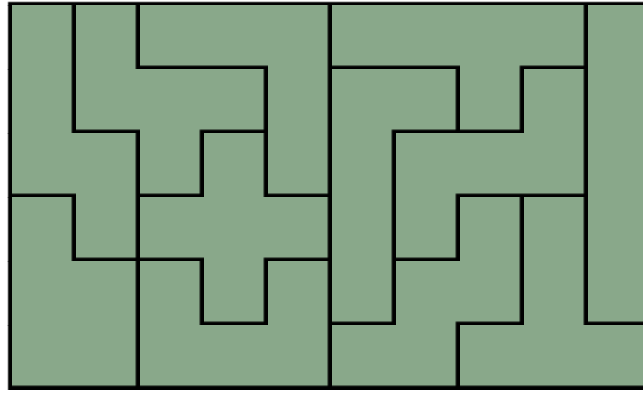
A *pentomino* is an arrangement of 5 unit squares (or sometimes cubes) that are joined along their edges. Up to isomorphism (rotating and flipping), there are 12 possible shapes, which are illustrated below. Each piece is labelled by the letter that most accurately reflects its shape.



The problem is to fit the 12 pentomino pieces into various shapes, often rectangles. The rectangle shapes that fit all 60 squares are of sizes 3x20, 4x15, 5x12, and 6x10. Here's a solution to the 6 by 10 puzzle using the letter encoding.

```
NFVVVYYYYI
NFFFVLLYZI
NNFXVLZZZI
PNXXXLZWTI
PPUXULWWTI
PPUUUWTTT
```

Much better looking is the same solution using tables and gifs.



The algorithm used by COS is a clever backtracking algorithm, as described in the upcoming book "Combinatorial Generation."

Here is [a page](#) of more solutions to various pentomino puzzles.

Big List of Pentomino Related Links

The may get stale with time. Please send us any updated addresses or new ones that should be included.

- The [T.I.D. Ronse School Pentominos Page](#) contains information as well as a pentomino creation contest. The page was mostly compiled by students aged 14 years and their math teacher Odette De Meulemeester!
- The [Polyomino FUZION Page](#) contains a few interesting pentomino games and a link to a downloadable Pentomino solver called "FUZION".
- Some related links are on COS's [polyomino information page](#).
- Adrian Smith has created a page, [Pentomino Relationships](#), that contains all solutions to the rectangular pentomino puzzles using his classification scheme. AMAZING!
- Here is a [site](#) on mathematical games and recreations that mentions pentominoes.
- A [Sather program](#) for generating the solutions on a 6 by 10 board.
- A really nifty 8 by 8 java [Pentomino Solver](#).
- David Eppstein's "Geometry Junkyard" entry on [polyominoes and other Animals](#).
- Rodolfo Kurchan runs a magazine [Puzzle Fun](#) that is devoted to puzzles involving polyominoes.
- Andrew L. Clarke created a site called [The Poly Pages](#) that contains a wealth of information about Polyominoes and other "polyforms".

For more information on pentominoes consult the classic book by [Solomon W. Golomb](#), *Polyominoes*, Scribner's, New York, 1965, or the more recent book *Polyominoes (A Guide to Puzzles and Problems in Tiling)* MAA, 1991, by George E. Martin.

Programs available:

- [C program](#) ✖
 - [Pascal program](#) ✖
-



Questions?? Email [The wizard of COS](#).

(Please note that the suffix XXXX must be removed from the preceding email address.)

It was last updated Wednesday, 10-May-2006 10:32:13 PDT.

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