Polyomino Word-Puzzle Results

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EDITOR'S NOTE: In our last issue we presented a near-solution to one of the pentomino word-problems. Now, J. A. Lindon has arrived at the first complete solution to one of these problems, which we present at the end of this article. At the same time, Donald A. Drury, who provides (below) suggestions for solving some lower order trimino problems, has written to point out, concerning all these polyomino word-problems: "To make the reflection a *new* problem, you must rule out using the same words in any diagram as were used in its reflected opposite. Otherwise, by simply using the same words in *reverse order,* top to bottom, you can solve both Rotation "X" and Reflection "X."
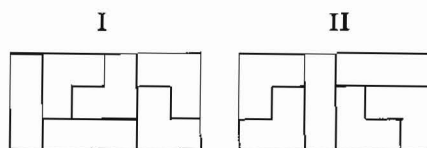
Let us take a look at the trimino problems, which appear much easier than they are, and Mr. Drury's suggestions and sample solutions:
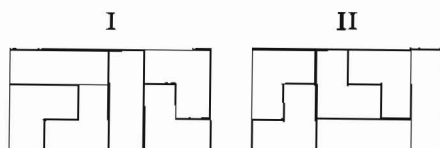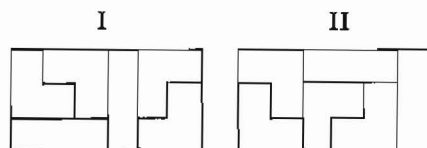
Problem #1   Problem #2

I   II   I   II
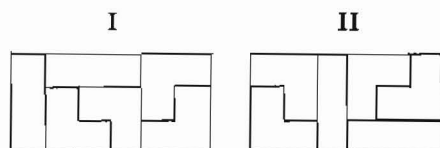
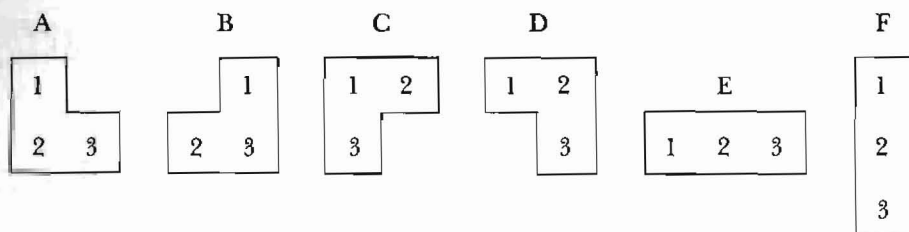(Rotation A)   (Reflection A)

Problem #3   Problem #4

I   II   I   II

(Rotation B)   (Reflection B)

Suggestions for solving the non-rotating trimino puzzle problems:

(1) Get a supply of quadrille graph paper (4 or 5 squares to the inch).

(2) Draw several diagrams for the same problem. This way, when you transfer letters from Rectangle I to Rectangle II, you can test out alternatives as you go—by changing word endings, revising words to get letter-combinations which will transfer more successfully from I to II, etc.

(3) The letter-number diagram for the six triminoes (above) may be helpful in keeping track of the way that the letter-sequences change as the triminoes move into different relative positions in each pair of rectangles. For example, using the diagram *as it applies to Problem #1 only,* we note the following sequences in each of the six-letter words for the two pairs of rectangles:

	Rectangle I						Rectangle II					
Line 1:	F1	E1	E2	E3	C1	C2	Line 1:	D1	D2	F1	C1	C2	B1
Line 2:	F2	A1	D1	D2	C3	B1	Line 2:	A1	D3	F2	C3	B2	B3
Line 3:	F3	A2	A3	D3	B2	B3	Line 3:	A2	A3	F3	E1	E2	E3

Note: Underlining indicates special problem areas—i.e., letters (spaces) which occur on the same line in both rectangles but which have different relative positions in each.
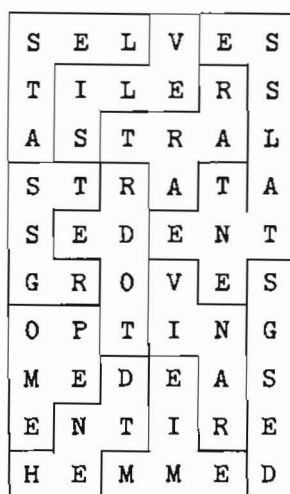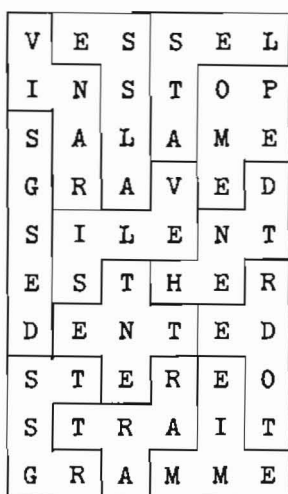
Two sample solutions to Problem #1:

F	A	R	D	L	E		O	F	F	L	E	T
P	R	O	F	I	T		R	A	P	I	D	S
T	R	E	A	D	S		R	E	T	A	R	D

P	I	N	E	A	L		S	E	P	A	L	S
A	S	S	E	S	S		S	T	A	S	E	S	*
P	R	A	T	E	S		R	A	P	I	N	E

• *stases* = plural of *stasis*

Of the pentomino solution below, J. A. Lindon writes:

"A passable solution, no more. INSTOP and SALAME (more usually in plural, SALAMI) are in most dictionaries. MEDEAS, as plural of MEDEA, seem perfectly justified: "There have been many MEDEAS, but not until this actress . . ." Best I can do anyway. And it took a bit of juggling, I can tell you, to get even the below."

V	E	S	S	E	L		S	E	L	V	E	S
I	N	S	T	O	P		T	I	L	E	R	S
S	A	L	A	M	E		A	S	T	R	A	L
G	R	A	V	E	D		S	T	R	A	T	A
S	I	L	E	N	T		S	E	D	E	N	T
E	S	T	H	E	R		G	R	O	V	E	S
D	E	N	T	E	D		O	P	T	I	N	G
S	T	E	R	E	O		M	E	D	E	A	S
S	T	R	A	I	T		E	N	T	I	R	E
G	R	A	M	M	E		H	E	M	M	E	D

Concerning the trimino problems, it should be noted that the 6 triminoes (the number of triminoes distinguishable when rotations and reflections are counted as separate triminoes) cannot be arranged into any other pair of three-by-six rectangles in such a way that when the triminoes move from one rectangle to the other, they all change their positions with respect to each other and also with respect to the rectangle as a whole.

One criterion for judging the quality of solutions to the polyomino problems could be the number of distinct letters used. Mr. Lindon's pentomino solution uses 16 different letters. An ultimate solution for one of the trimino problems would, by this criterion, utilize 18 different letters of the alphabet.

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ANAGRAMS

A confirmed bachelor
I face no bold charmer.   Amaranth, *Enigmatic Oddities,* January 29, 1904

Court of general session
Scenes of rogues on trial.   Phil O. Sopher, *Eusama,* January 1894

A coy debutante
Beauty to dance.   Jemand, *Enigma,* February 1914

Dante Gabriel Rossetti
Greatest born idealist.   Bolis, *Golden Days,* November 8, 1884

Days of Auld Lang Syne
Sunny gala days of eld.   Delian, *Complications,* June 19, 1907

Days of the Lenten Season
No flesh eaten on set days.   Scretaw, *Golden Days,* April 24, 1897