

50
Graded
Trax
Problems
with solutions

Collected and annotated by
Martin Møller Skarbiniks Pedersen

Second edition
September 2011

Dear reader,

I started collecting trax puzzles several years ago and now I am able to present this small book which contains the best of these puzzles. You will find 50 puzzles on the following pages where the goal for each puzzle is to find the winning moves for one of the players.

In appendix D you can find solutions to all the problems. An explanation of the used notation can be found in appendix C.

If you discover any errors please write to me at traxplayer@gmail.com so these can be corrected in a second edition.

This book can be found at <http://www.gnutrax.com/book/> and you can print it free of charge.

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Thanks to 柏堅游 and Jeff Berrier for letting me know about an error in one of the solutions.

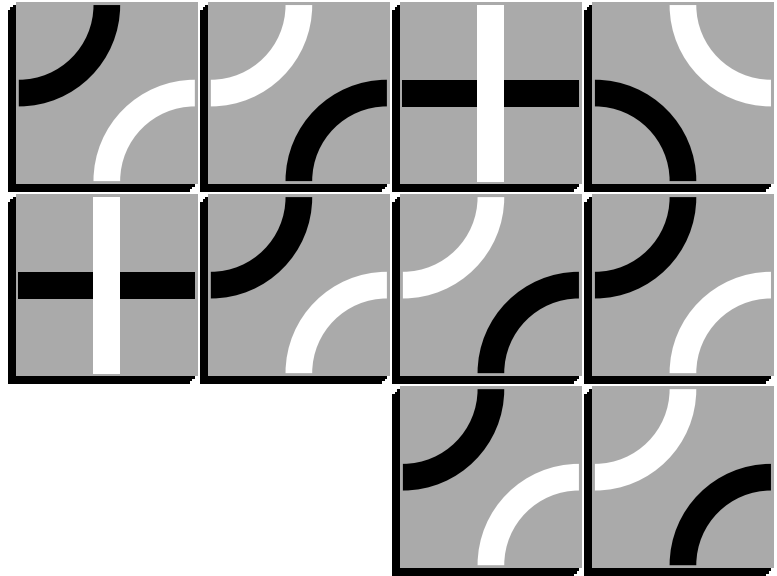
Thanks to Donald G. Bailey for letting me know about a handfull of errors.

Martin M. S. Pedersen
September 2011

Problem: 1

Difficulty: **

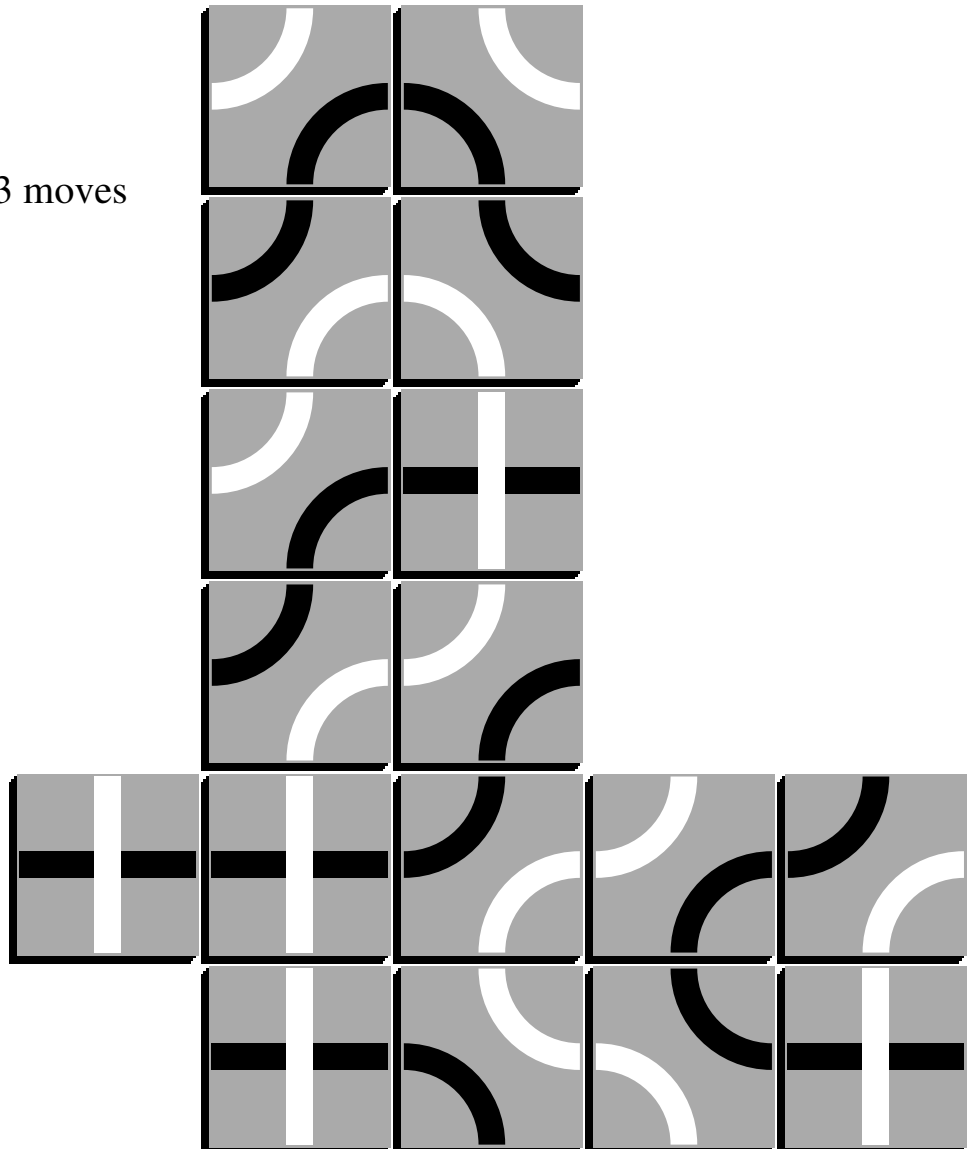
Black to play and win in 4 moves



Problem: 2

Difficulty: **

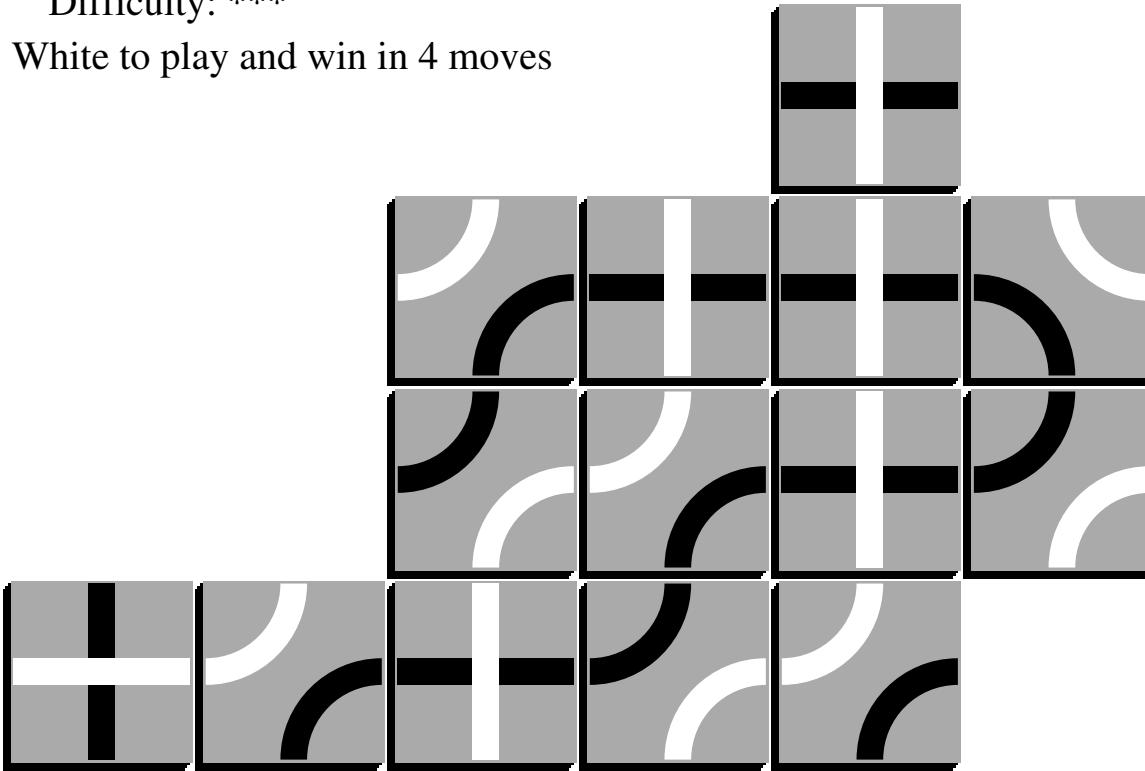
Black to play and win in 3 moves



Problem: 3

Difficulty: ***

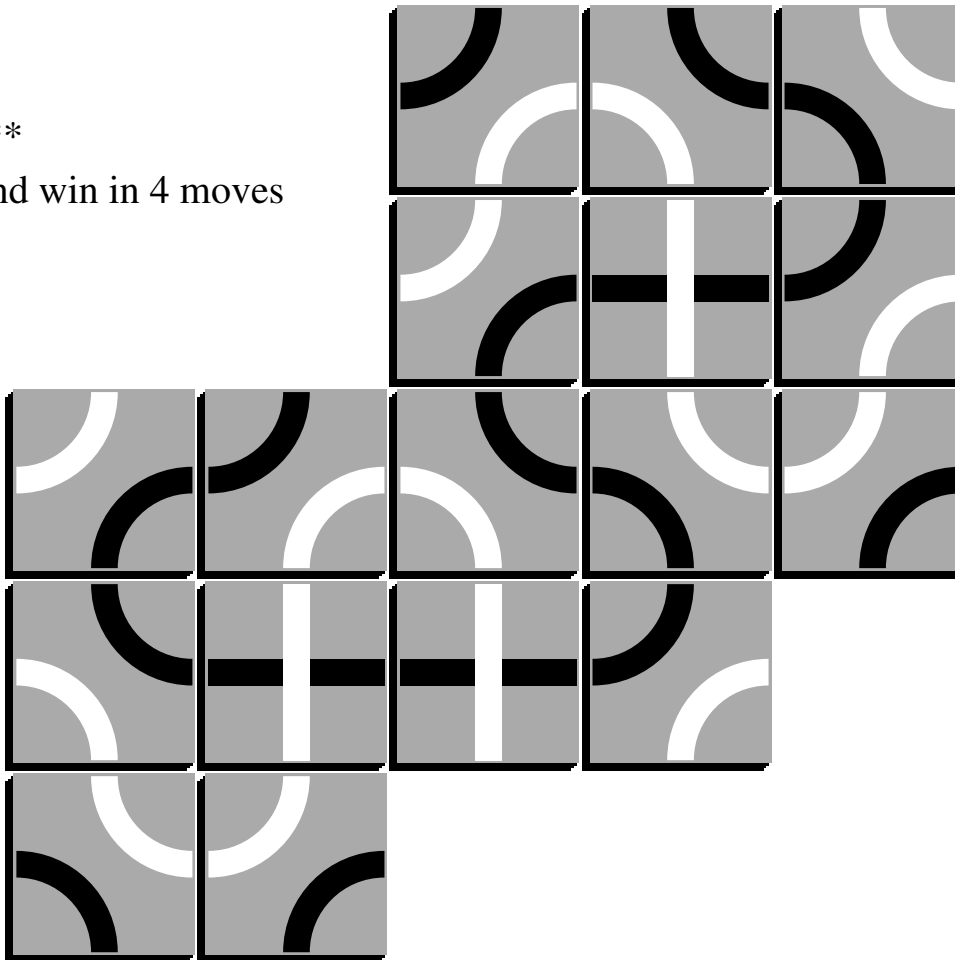
White to play and win in 4 moves



Problem: 4

Difficulty: ***

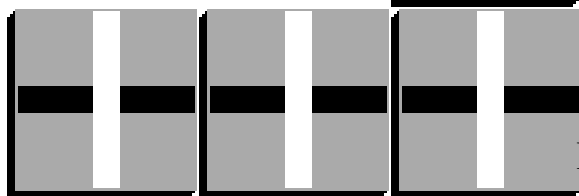
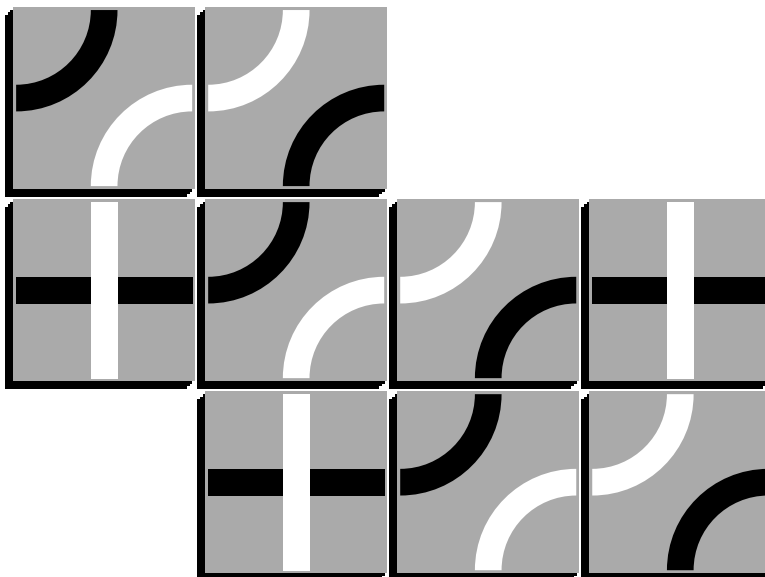
Black to play and win in 4 moves



Problem: 5

Difficulty: **

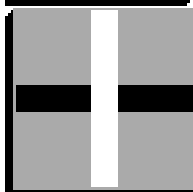
White to play and win in 5 moves



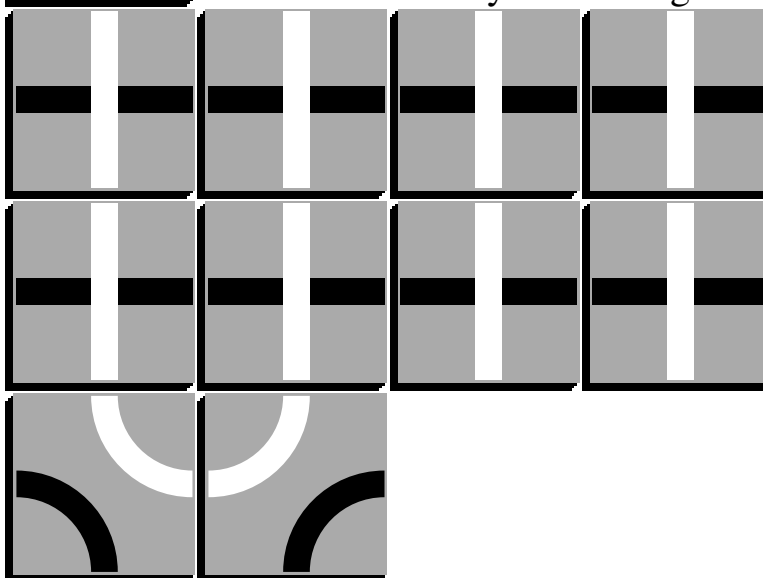
Problem: 6

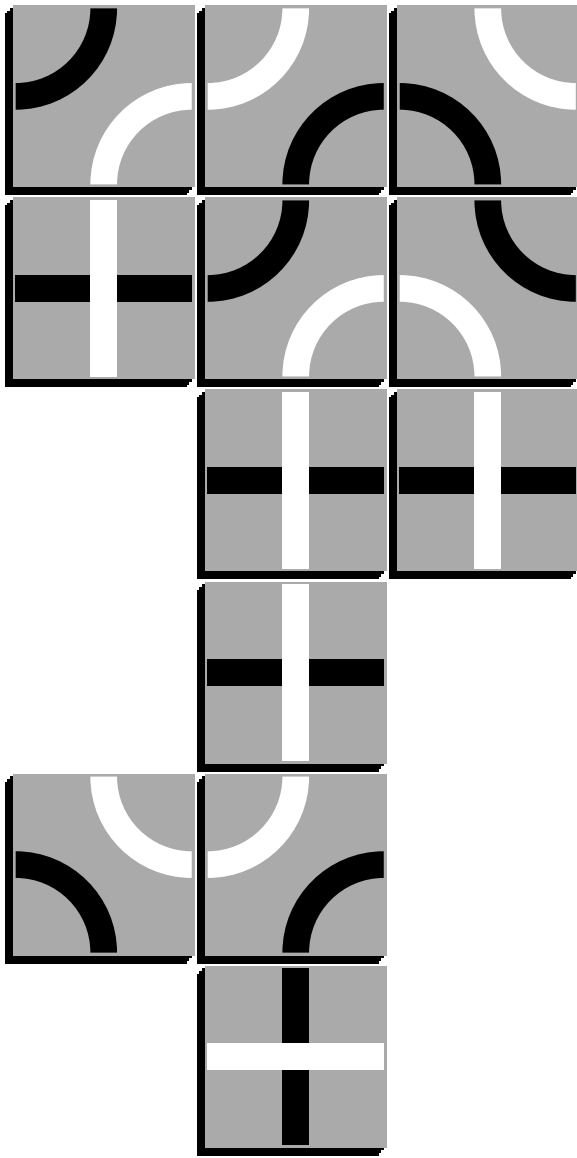
Difficulty: ****

Black to play and win in 5 moves

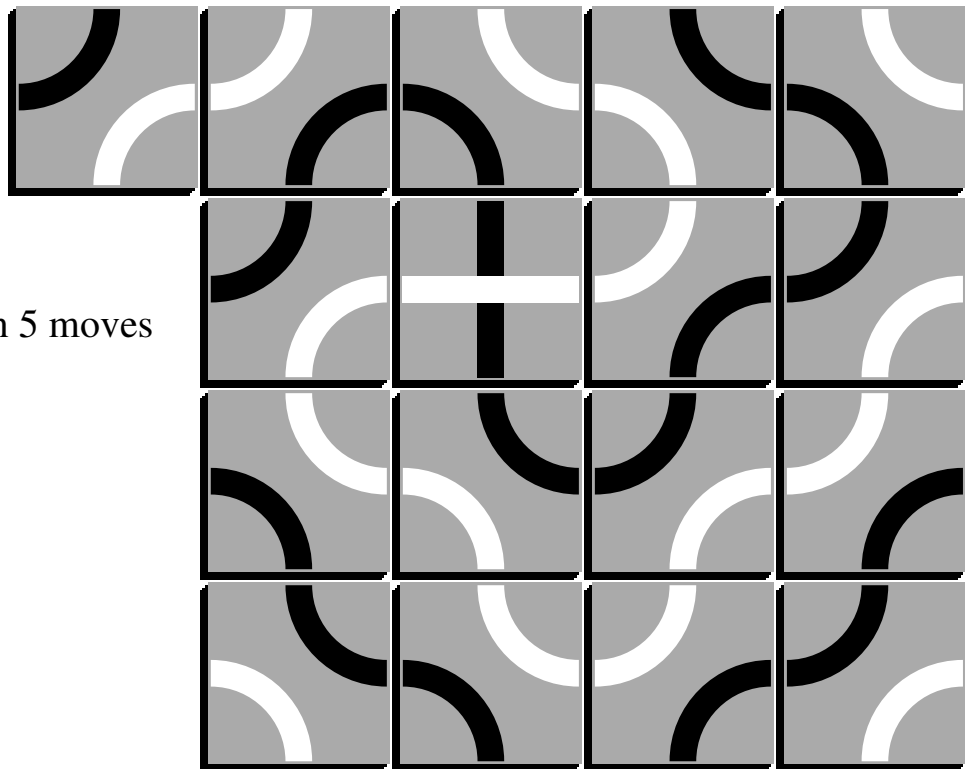


There is a simple 6 stage win at the bottom starting with D8\ but the goal is to find the another threat which only uses 5 stages.

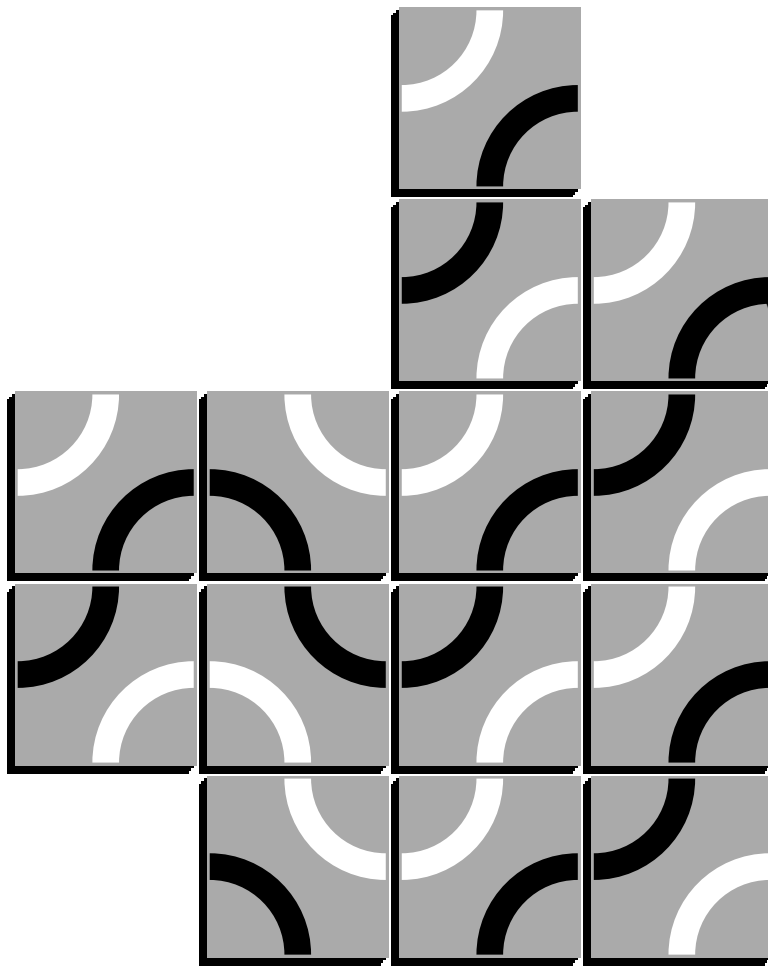




Problem: 7
 Difficulty: **
 Black to play and win in 3 moves



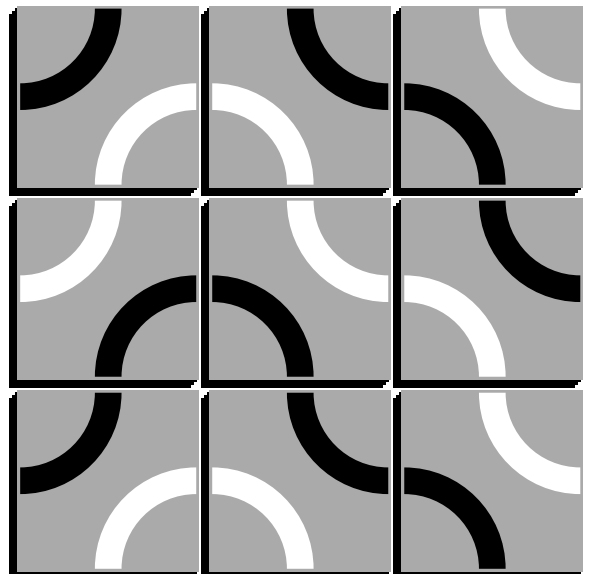
Problem: 8
 Difficulty: ***
 Black to play and win in 5 moves



Problem: 9

Difficulty: ***

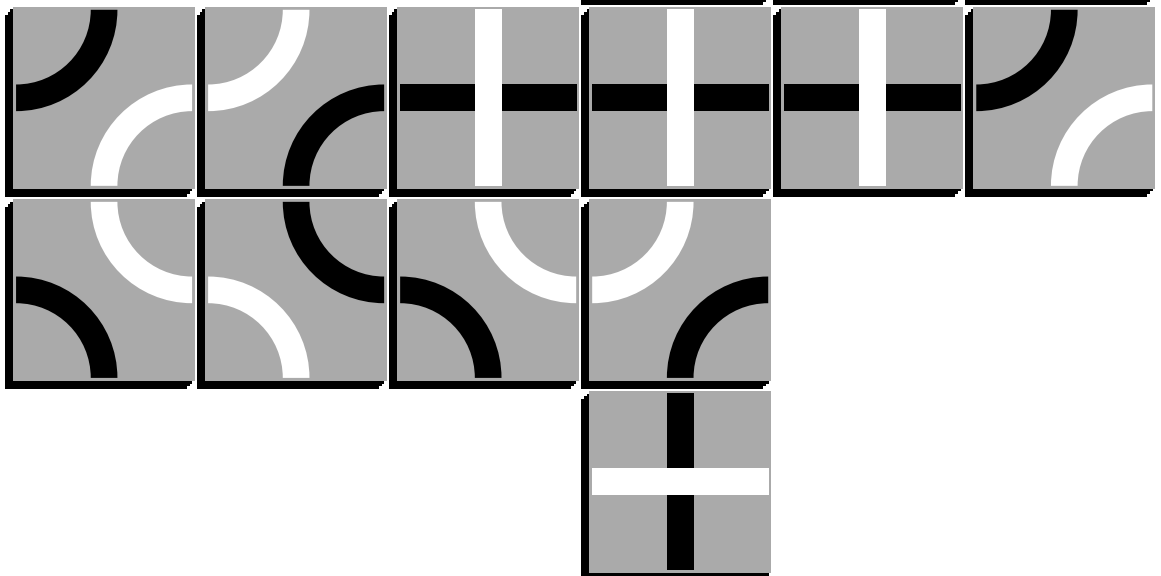
White to play and win in 4 moves

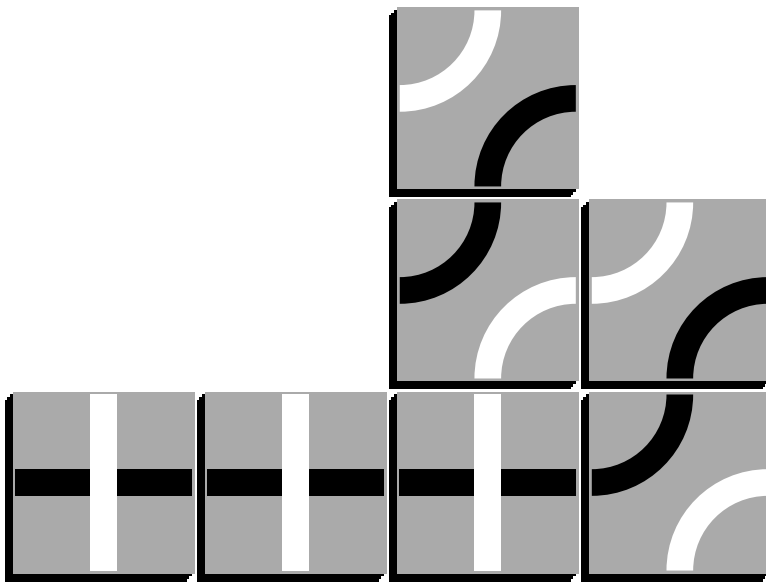


Problem: 10

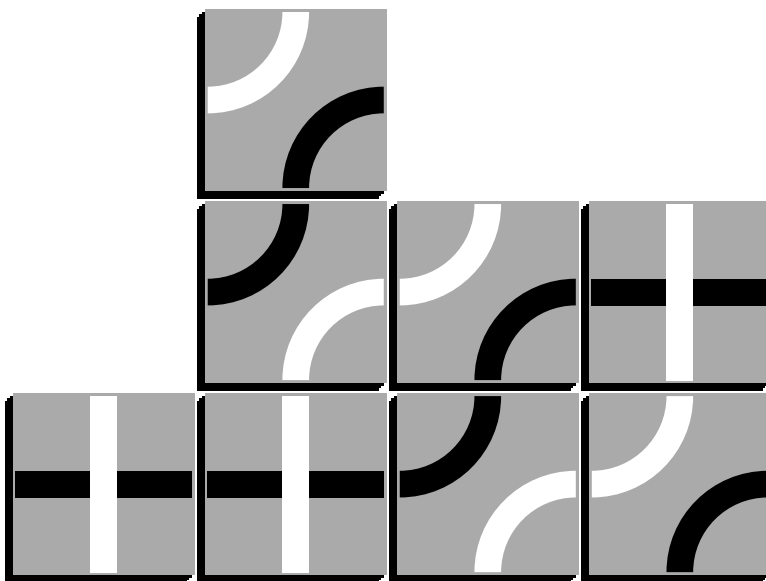
Difficulty: **

Black to play and win in 4 moves

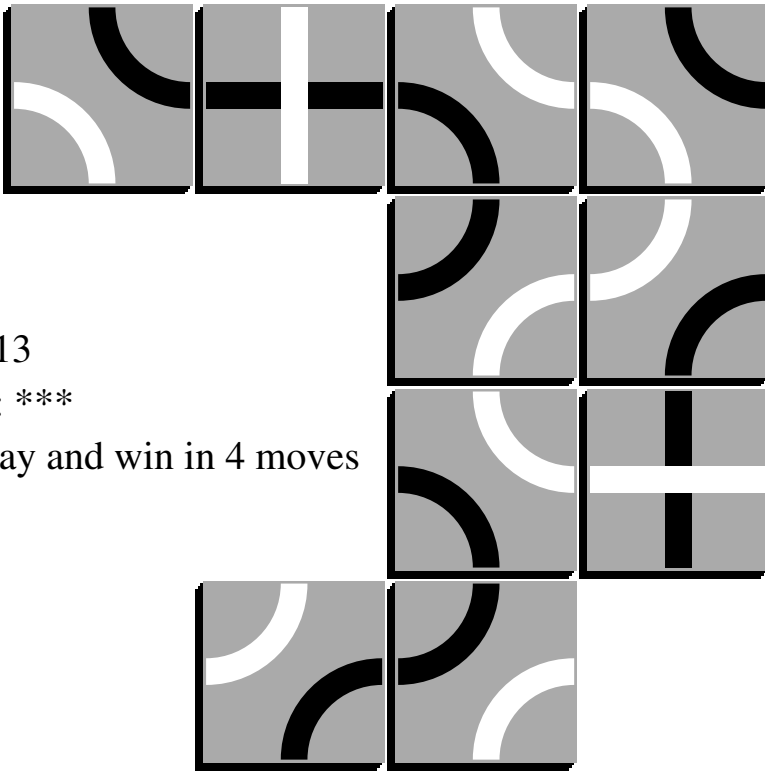




Problem: 11
 Difficulty: *
 White to play and win in 2 moves



Problem: 12
 Difficulty: ***
 White to play and win in 5 moves



Problem: 13

Difficulty: ***

White to play and win in 4 moves

Problem: 14

Difficulty: **

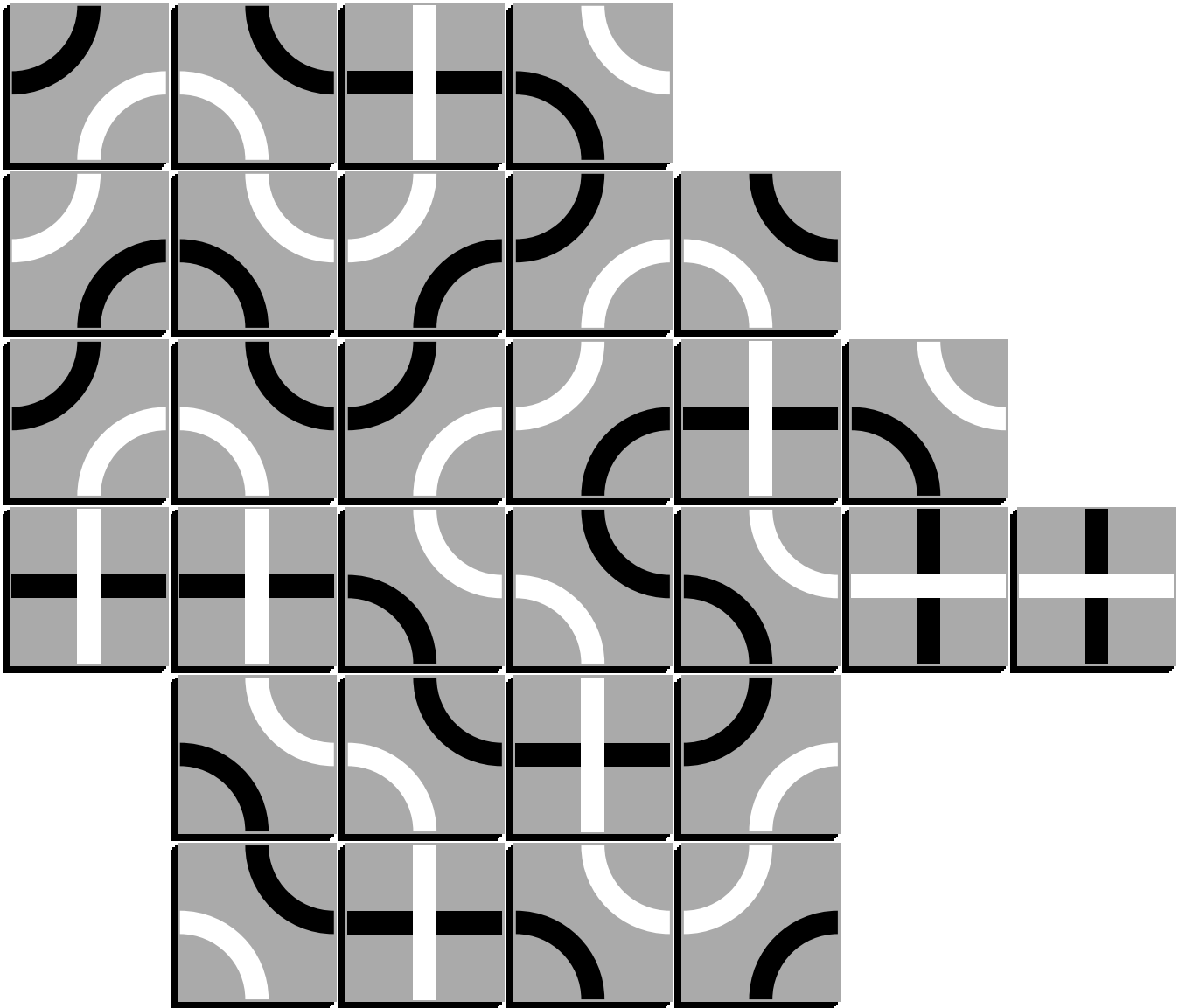
White to play and win in 3 moves



Problem: 15

Difficulty: ***

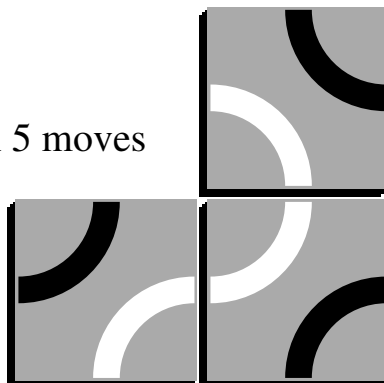
White to play and win in 4 moves



Problem: 16

Difficulty: **

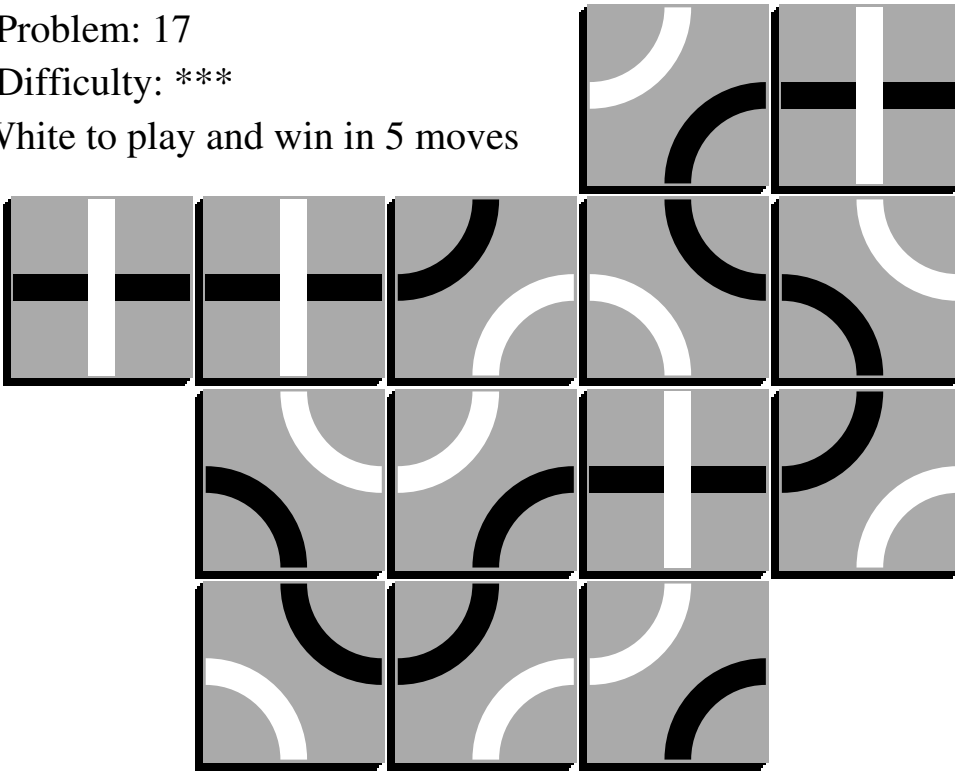
Black to play and win in 5 moves



Problem: 17

Difficulty: ***

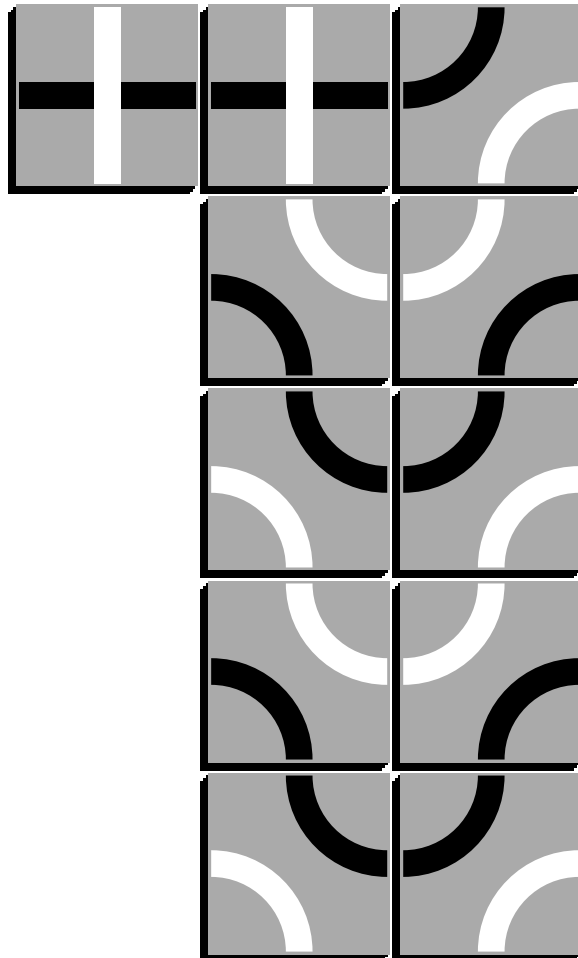
White to play and win in 5 moves



Problem: 18

Difficulty: **

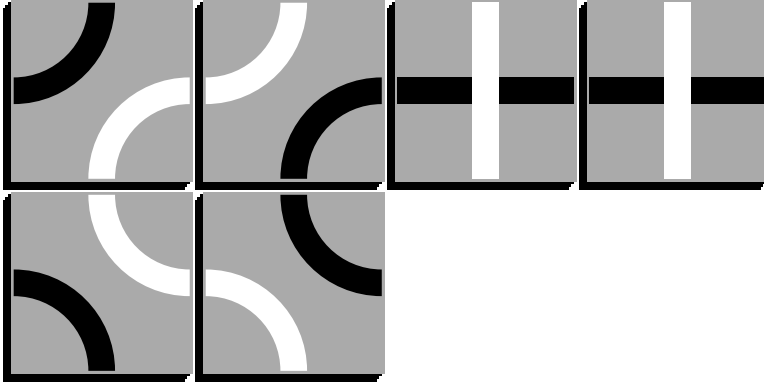
Black to play and win in 4 moves



Problem: 19

Difficulty: **

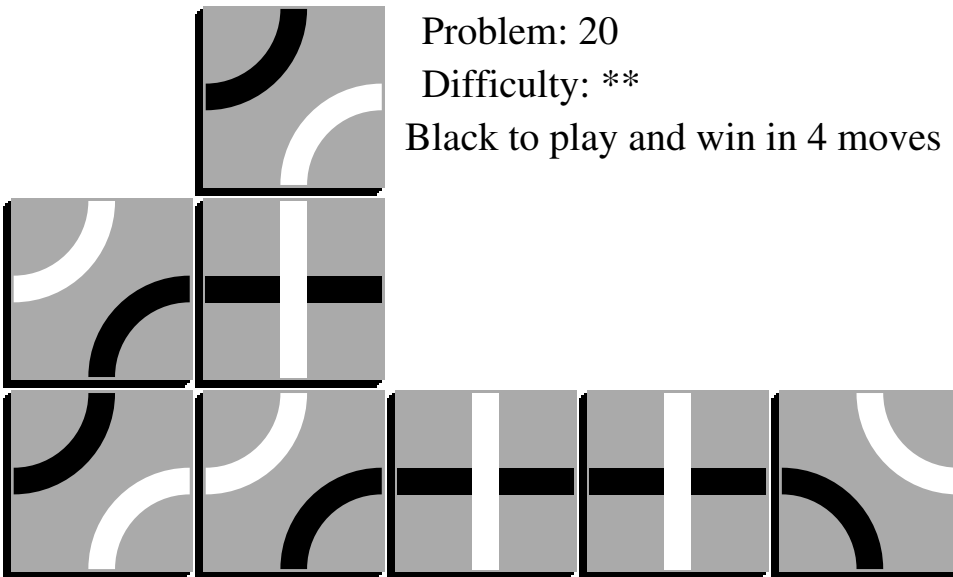
Black to play and win in 4 moves



Problem: 20

Difficulty: **

Black to play and win in 4 moves



Problem: 21

Difficulty: **

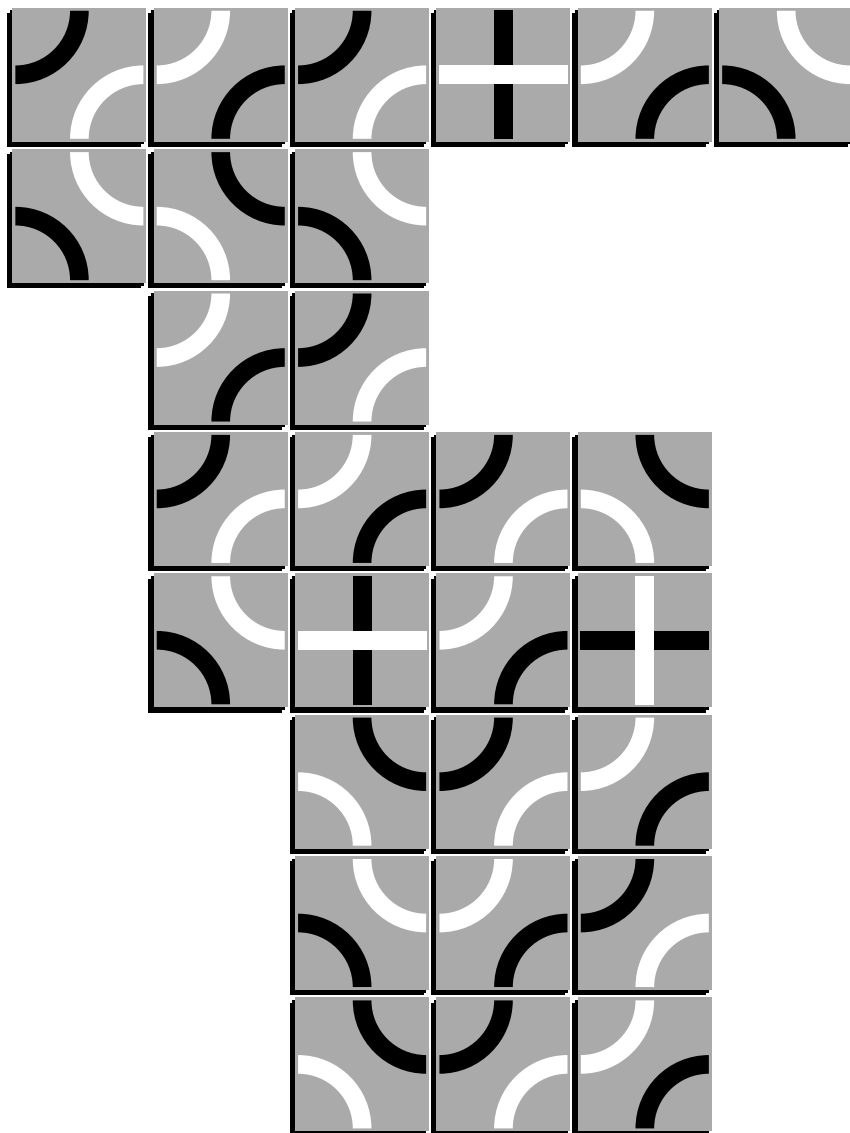
Black to play and win in 4 moves



Problem: 22

Difficulty: ***

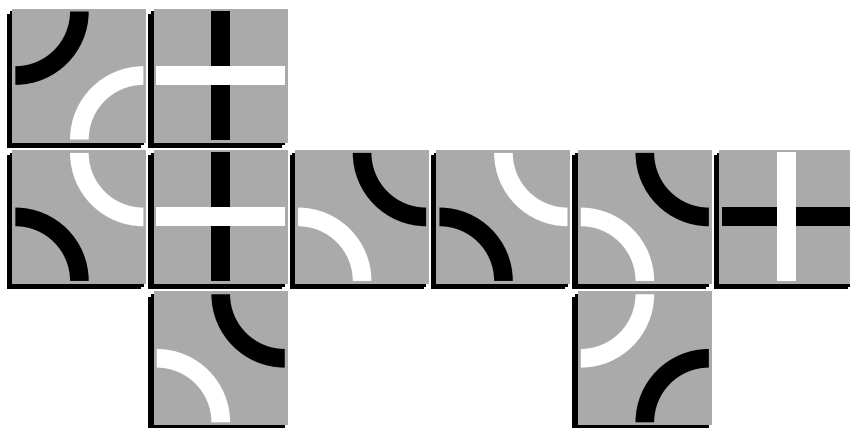
White to play and win in 2 moves



Problem: 23

Difficulty: **

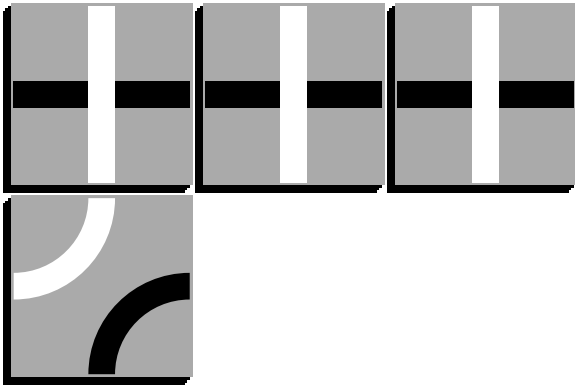
Black to play and win in 3 moves



Problem: 24

Difficulty: ***

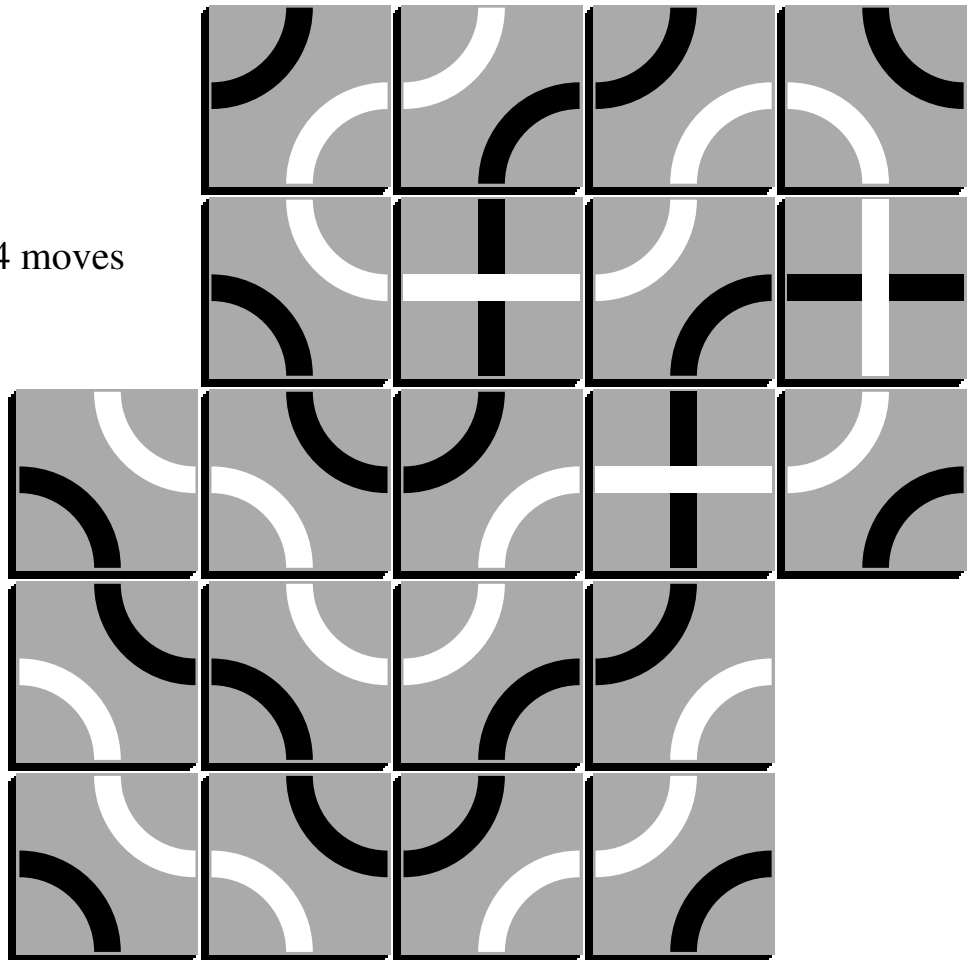
White to play and win in 6 moves



Problem: 25

Difficulty: ***

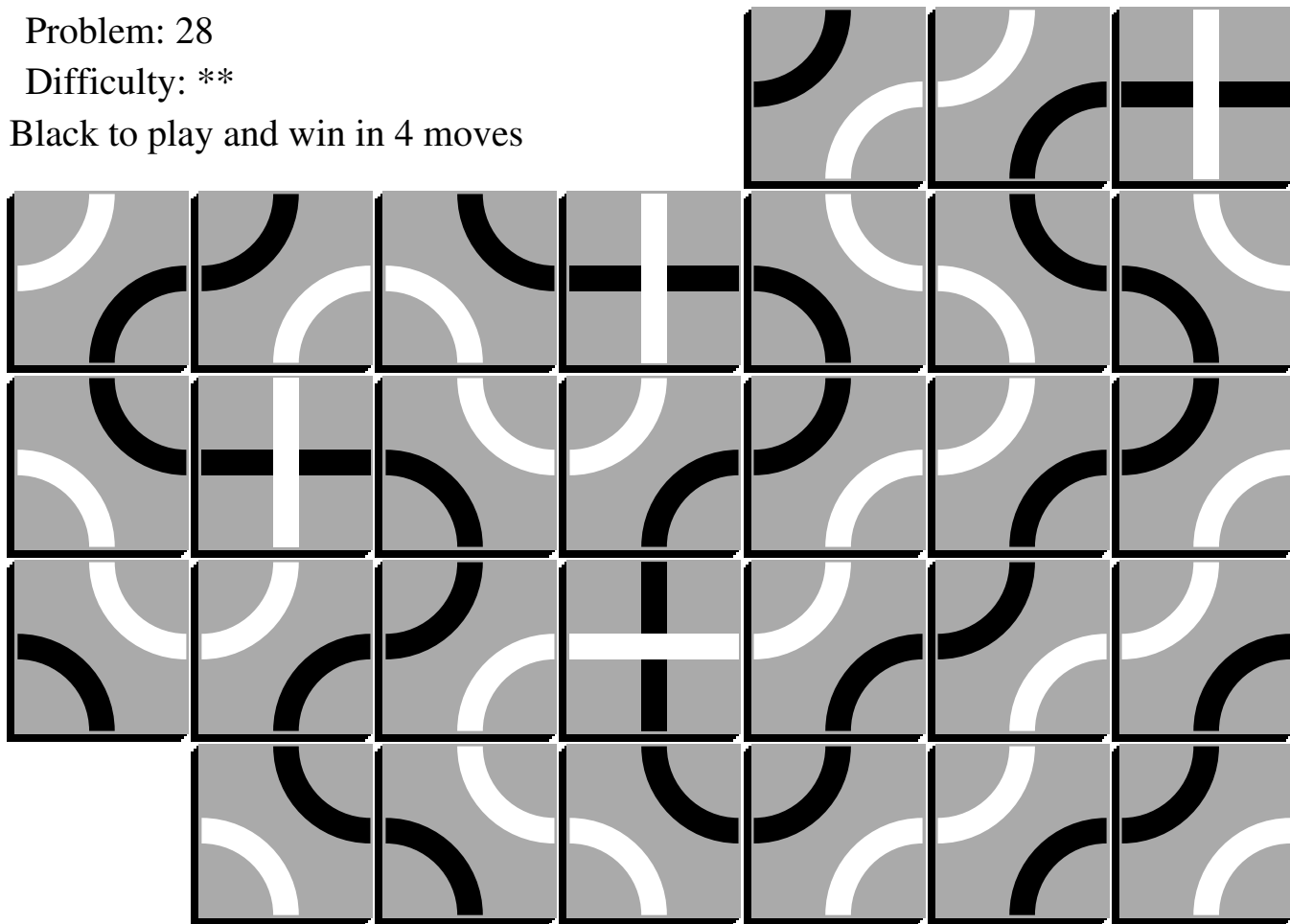
White to play and win in 4 moves



Problem: 28

Difficulty: **

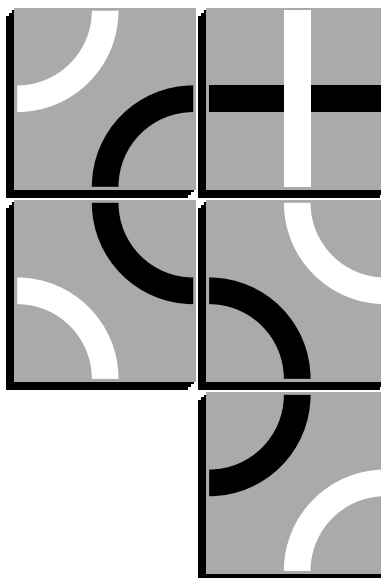
Black to play and win in 4 moves



Problem: 29

Difficulty: ***

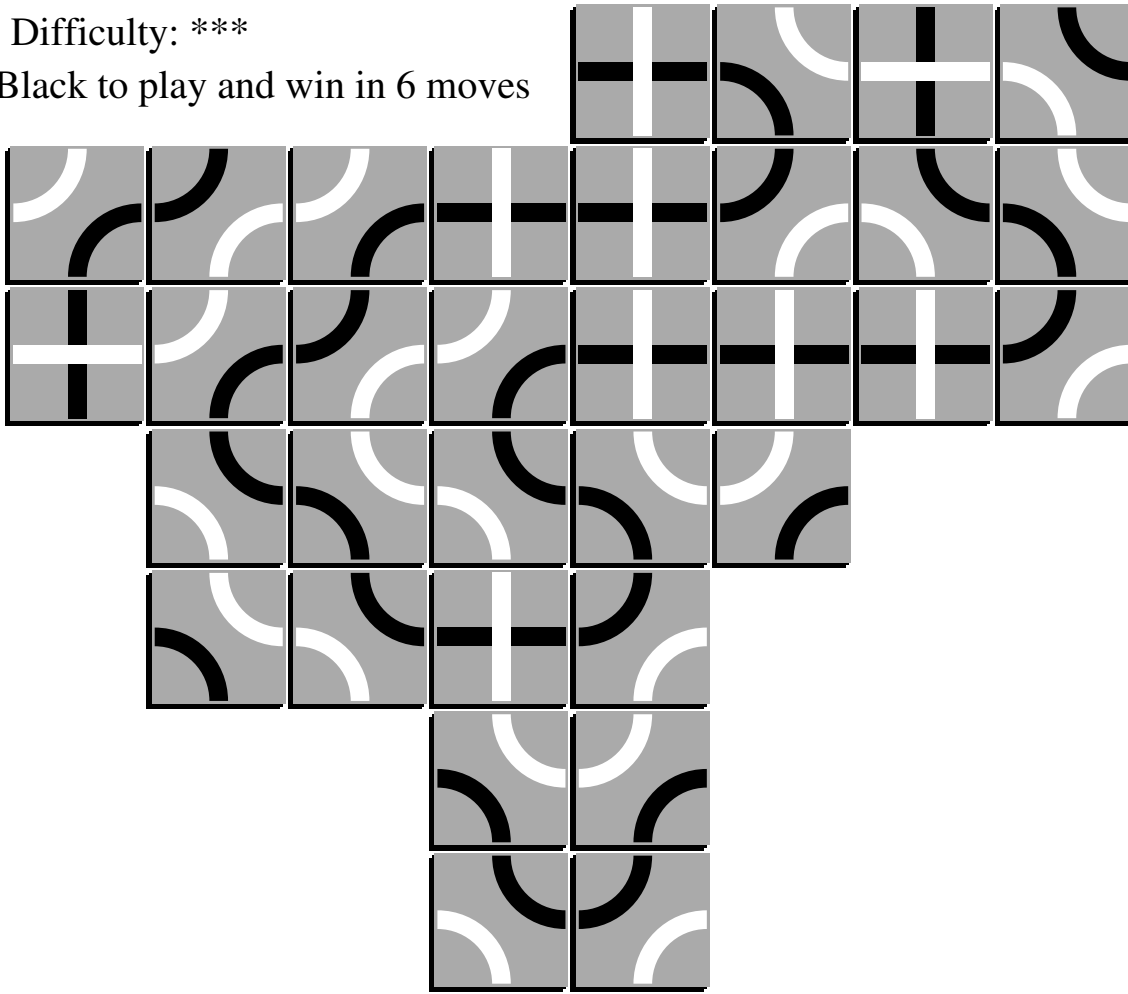
White to play and win in 5 moves



Problem: 30

Difficulty: ***

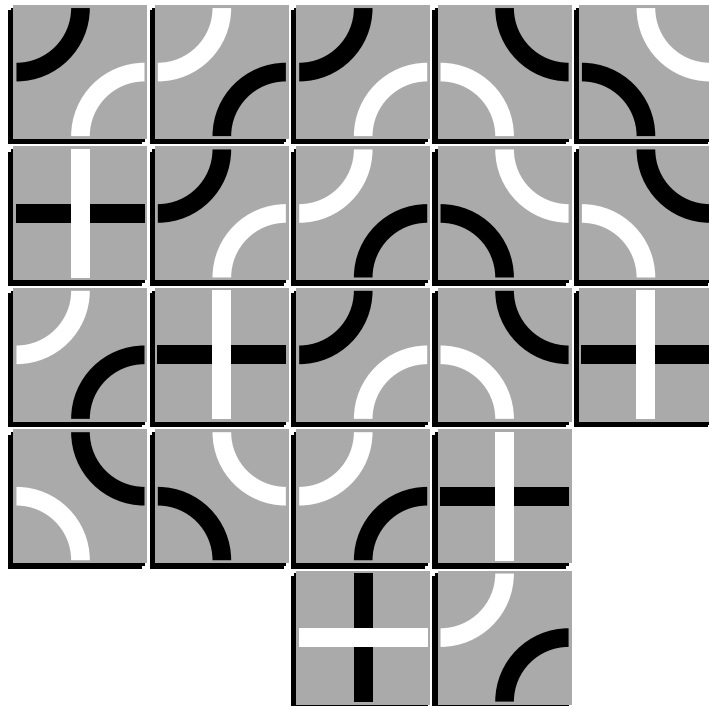
Black to play and win in 6 moves



Problem: 31

Difficulty: ***

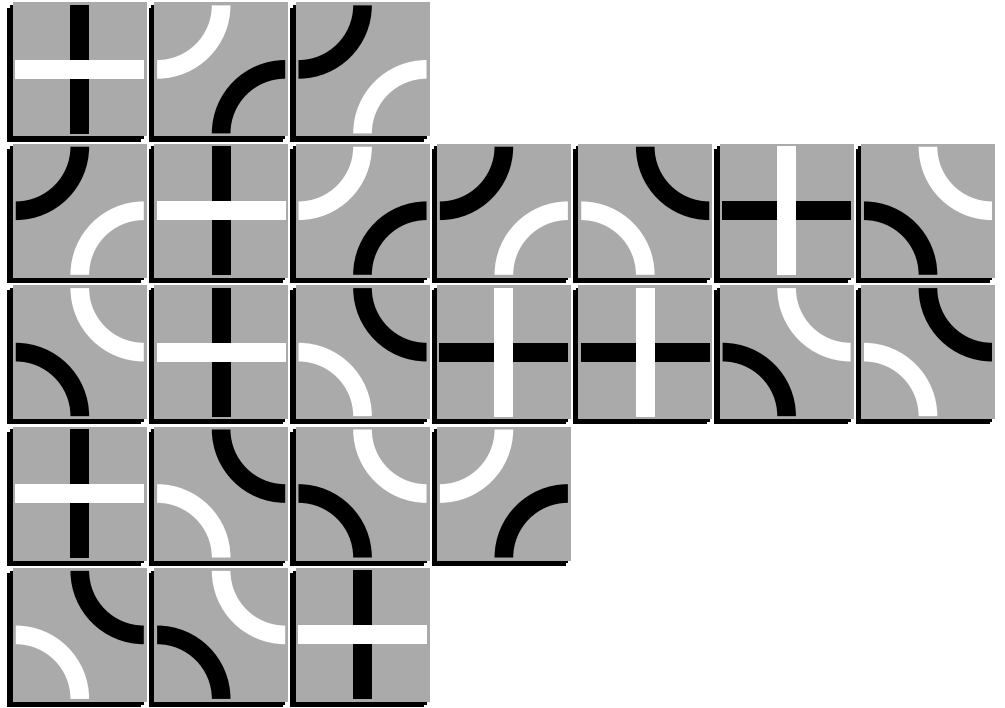
White to play and win in 6 moves



Problem: 32

Difficulty: ***

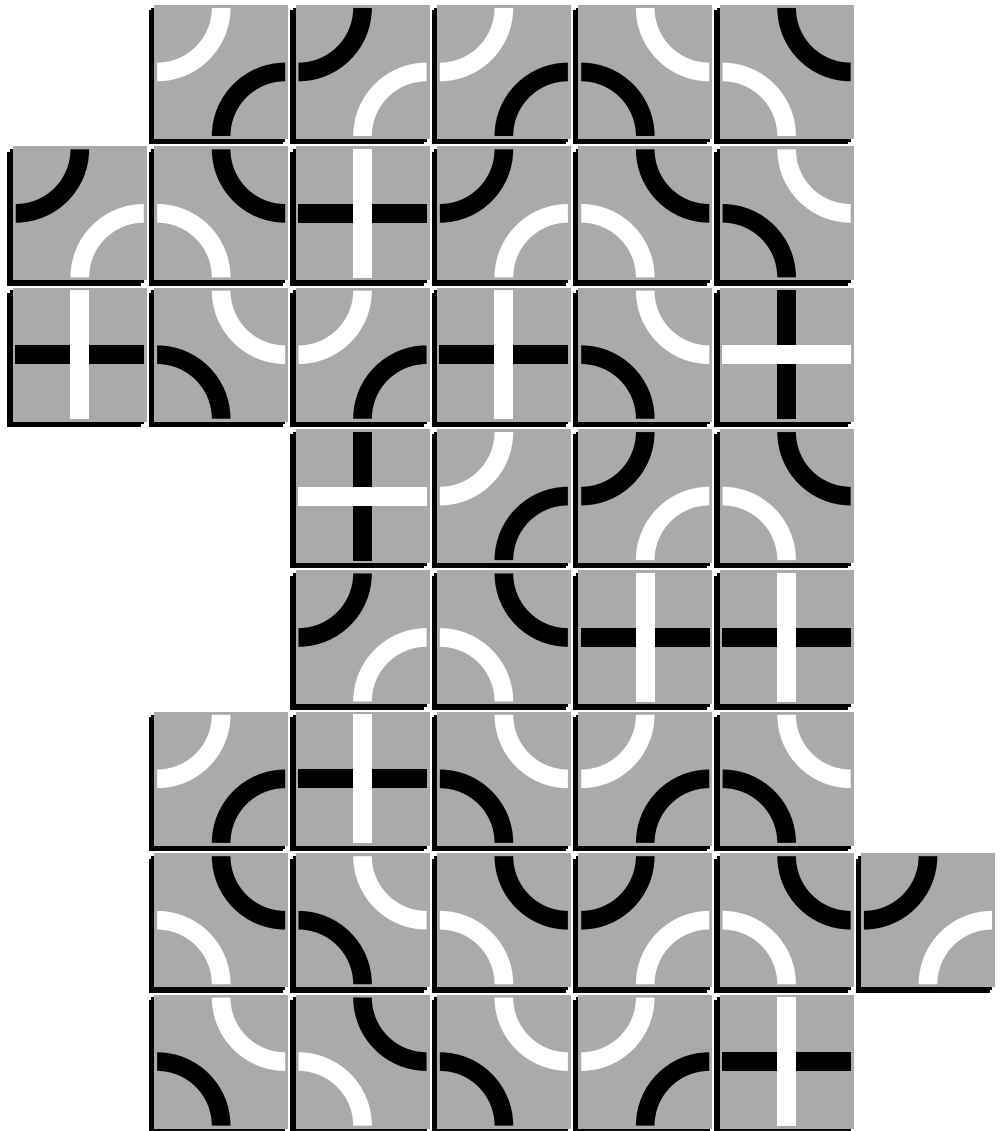
Black to play and
win in 5 moves



Problem: 33

Difficulty: ***

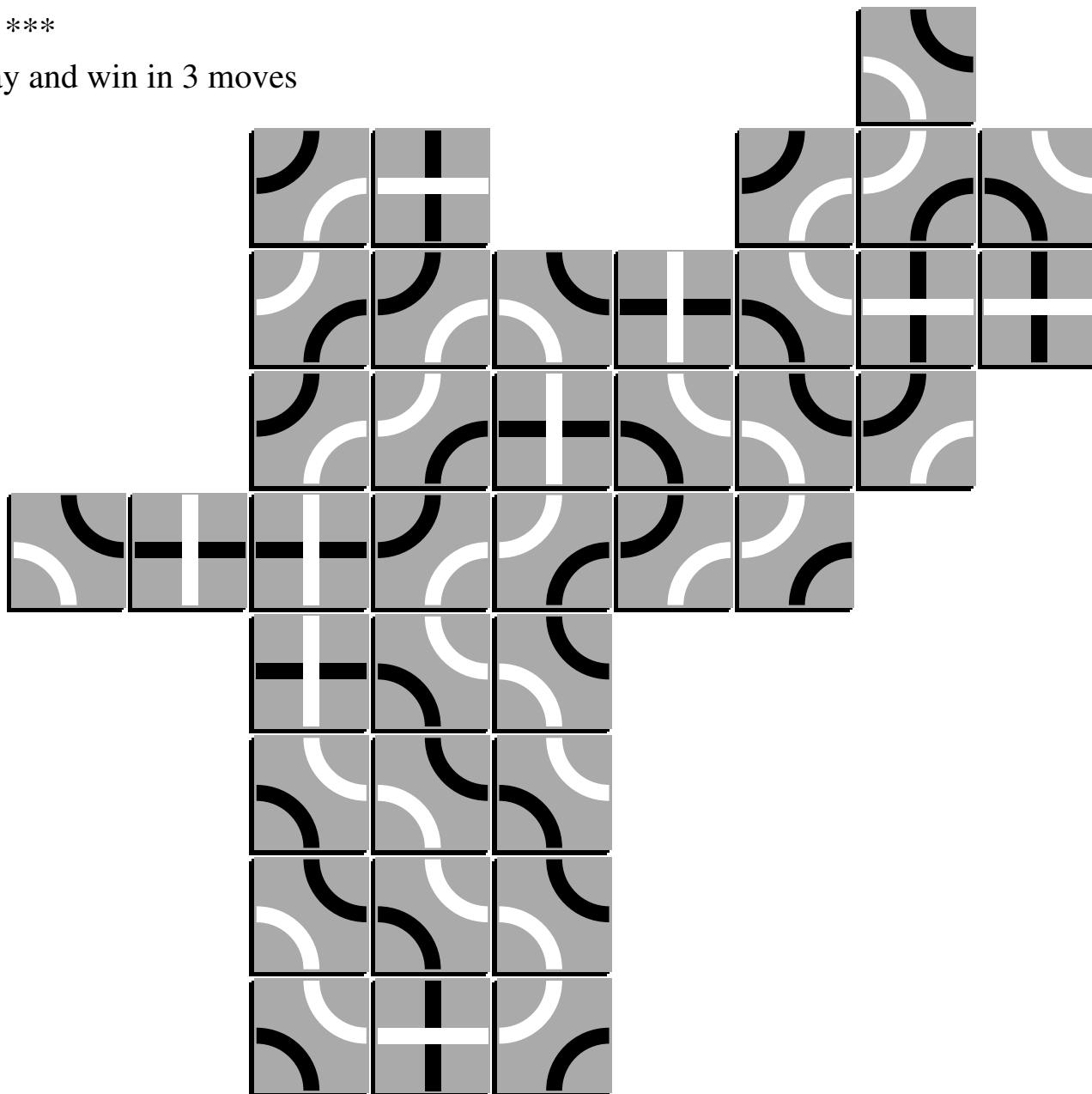
White to play and
win in 3 moves



Problem: 34

Difficulty: ***

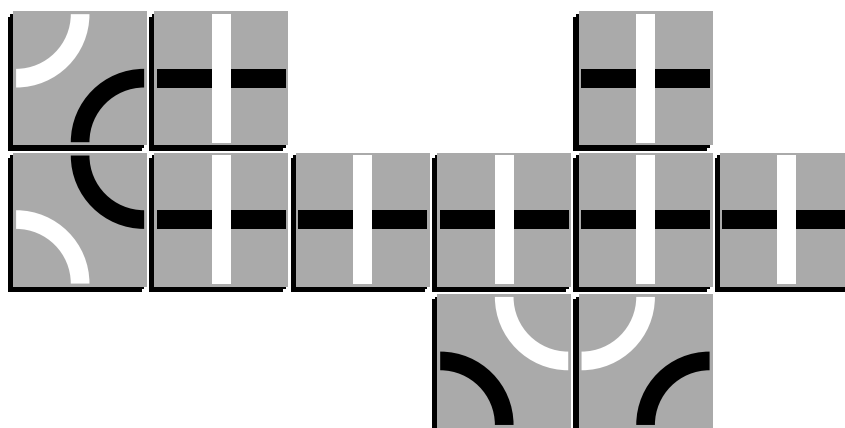
Black to play and win in 3 moves



Problem: 35

Difficulty: ****

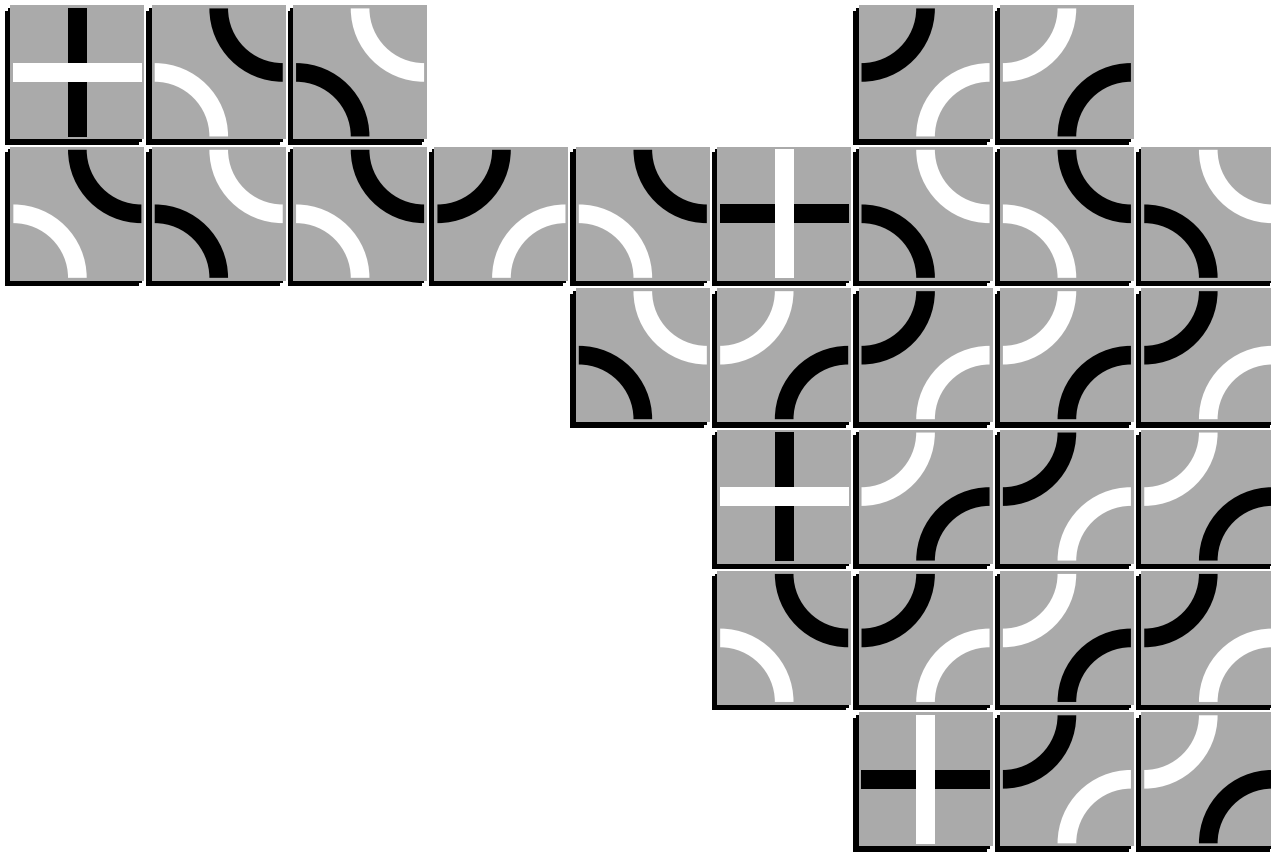
Black to play and win in 6 moves



Problem: 36

Difficulty: *

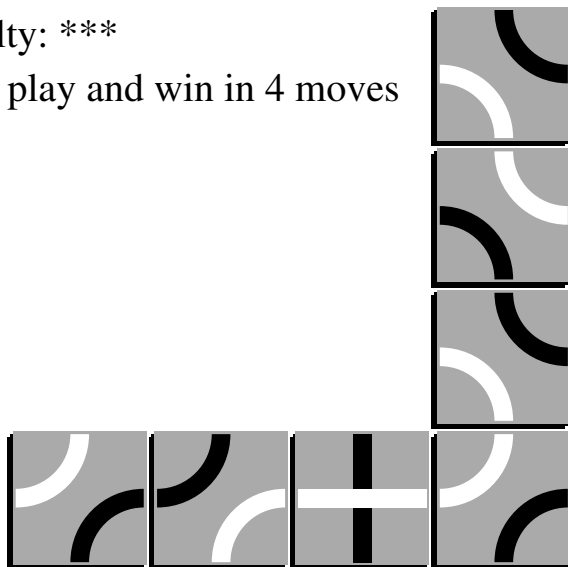
Black to play and win in 2 moves



Problem: 37

Difficulty: ***

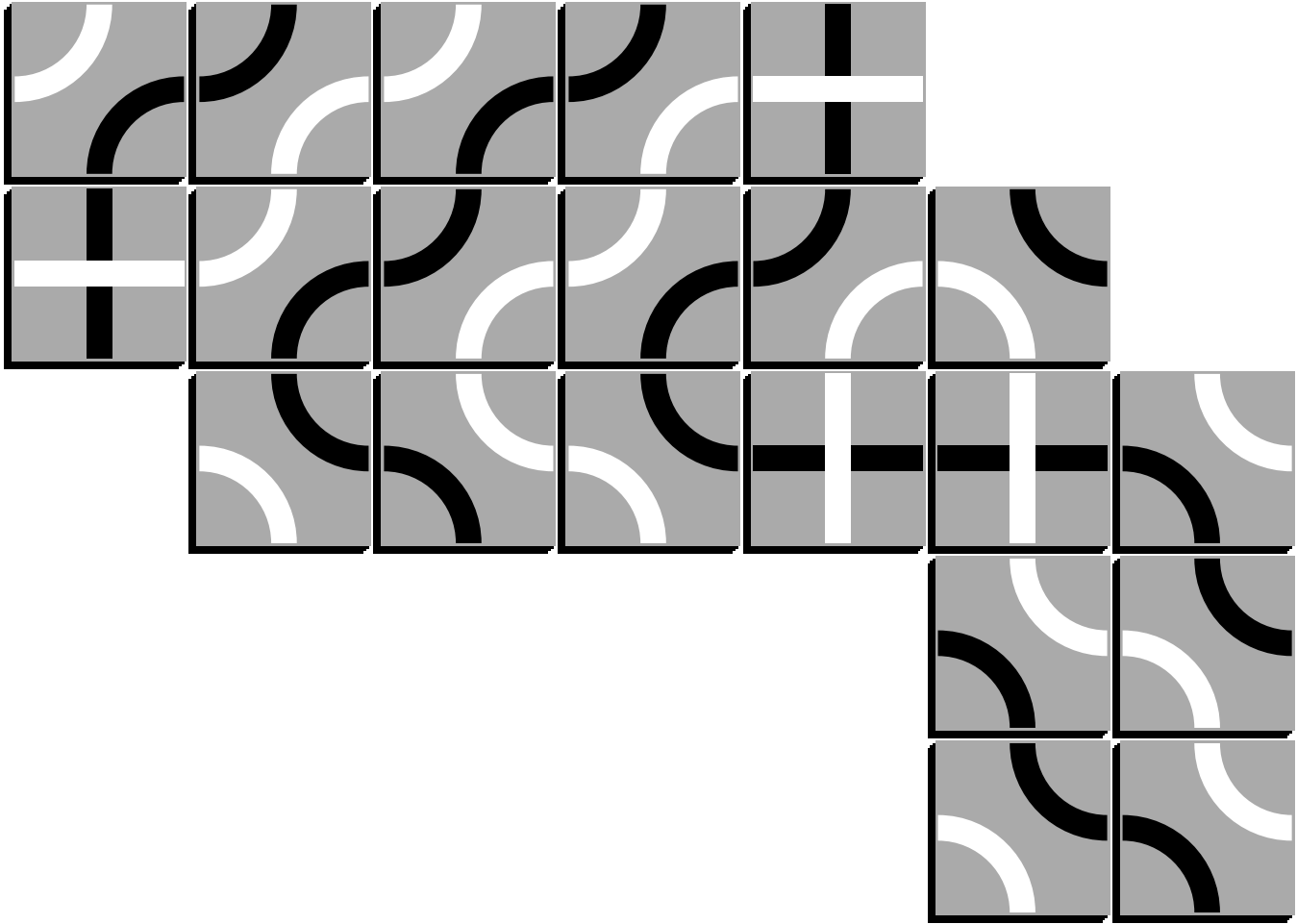
Black to play and win in 4 moves



Problem: 38

Difficulty: ***

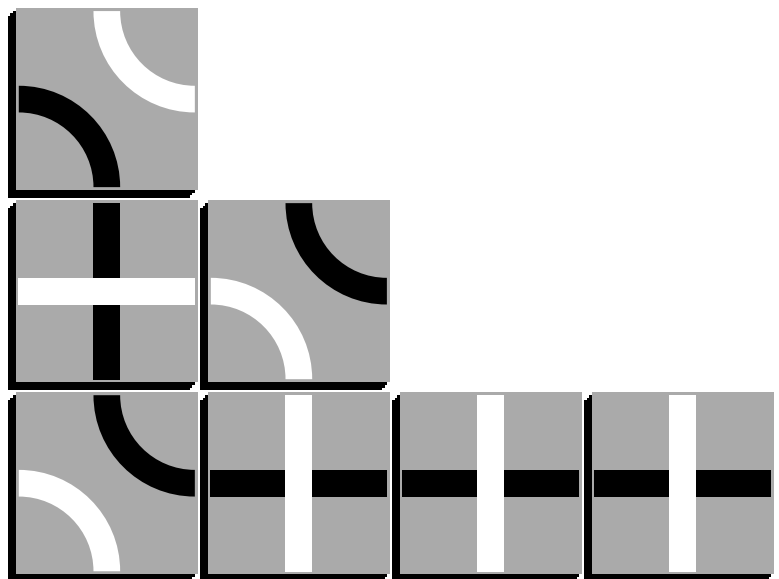
Black to play and win in 5 moves



Problem: 39

Difficulty: **

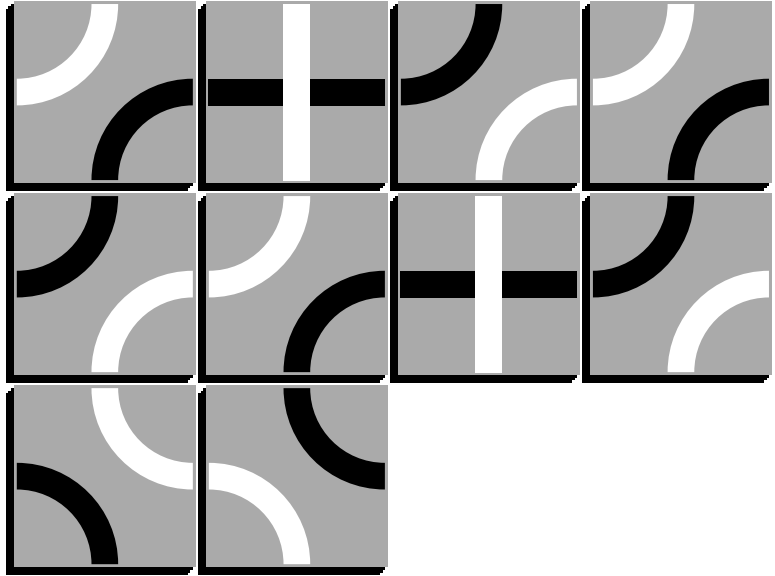
White to play and win in 3 moves



Problem: 40

Difficulty: ***

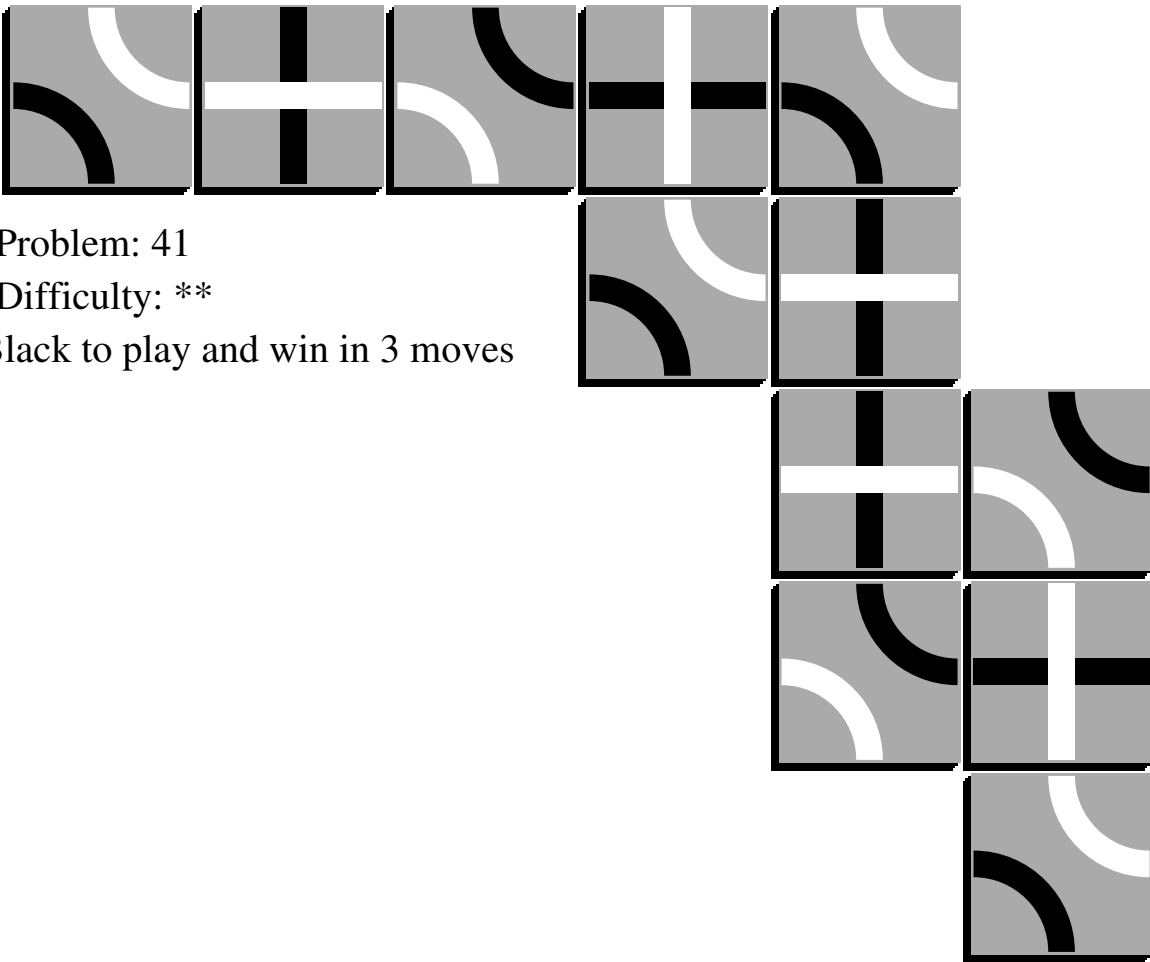
Black to play and win in 4 moves



Problem: 41

Difficulty: **

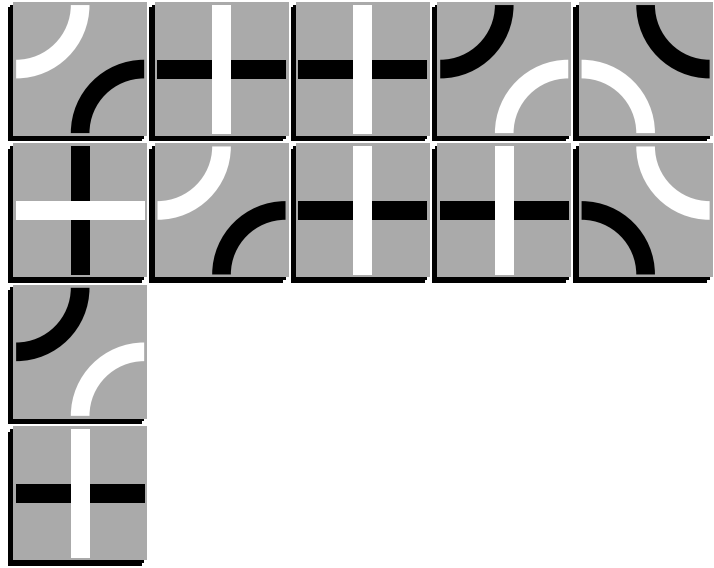
Black to play and win in 3 moves



Problem: 42

Difficulty: **

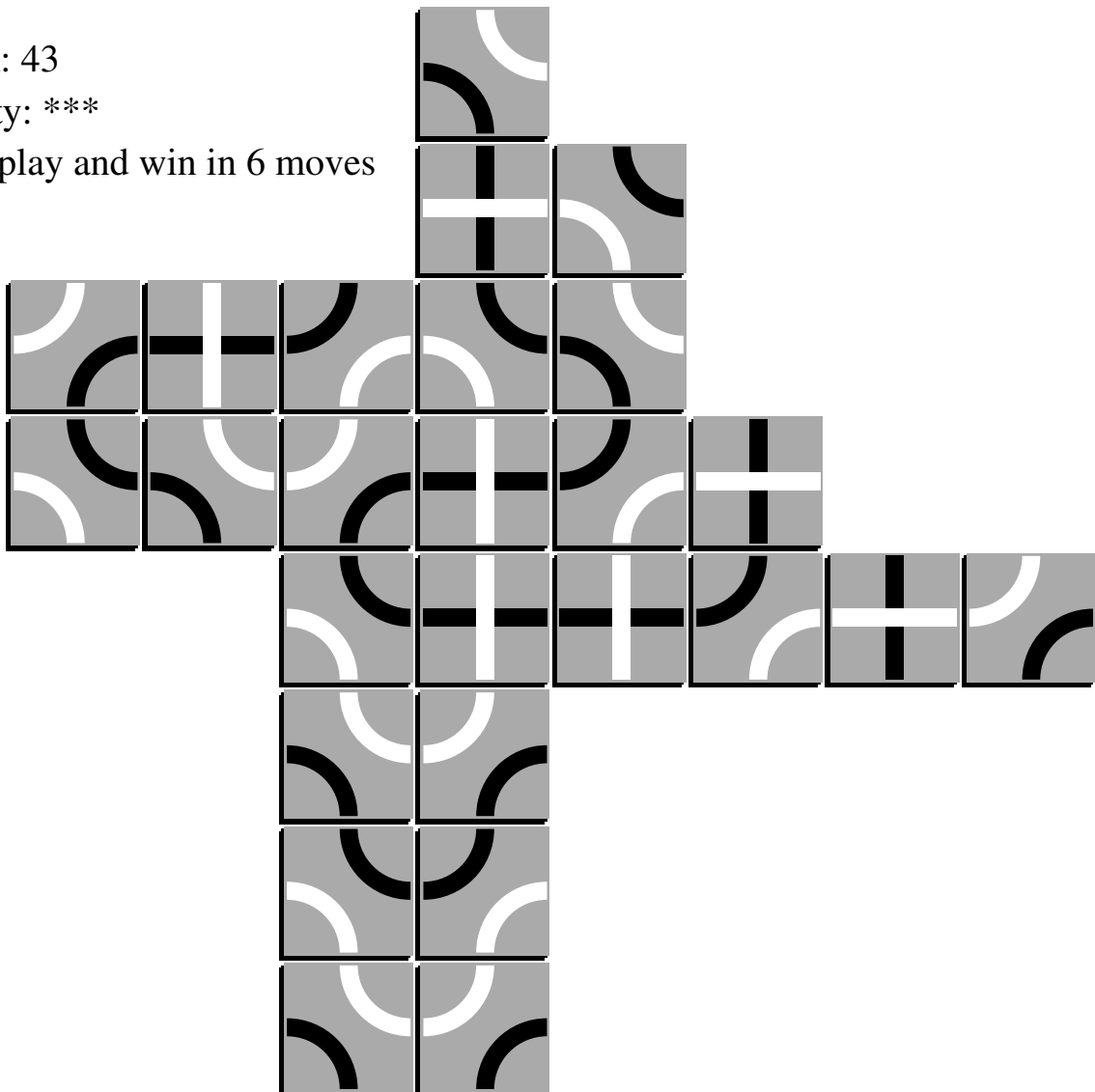
Black to play and win in 4 moves



Problem: 43

Difficulty: ***

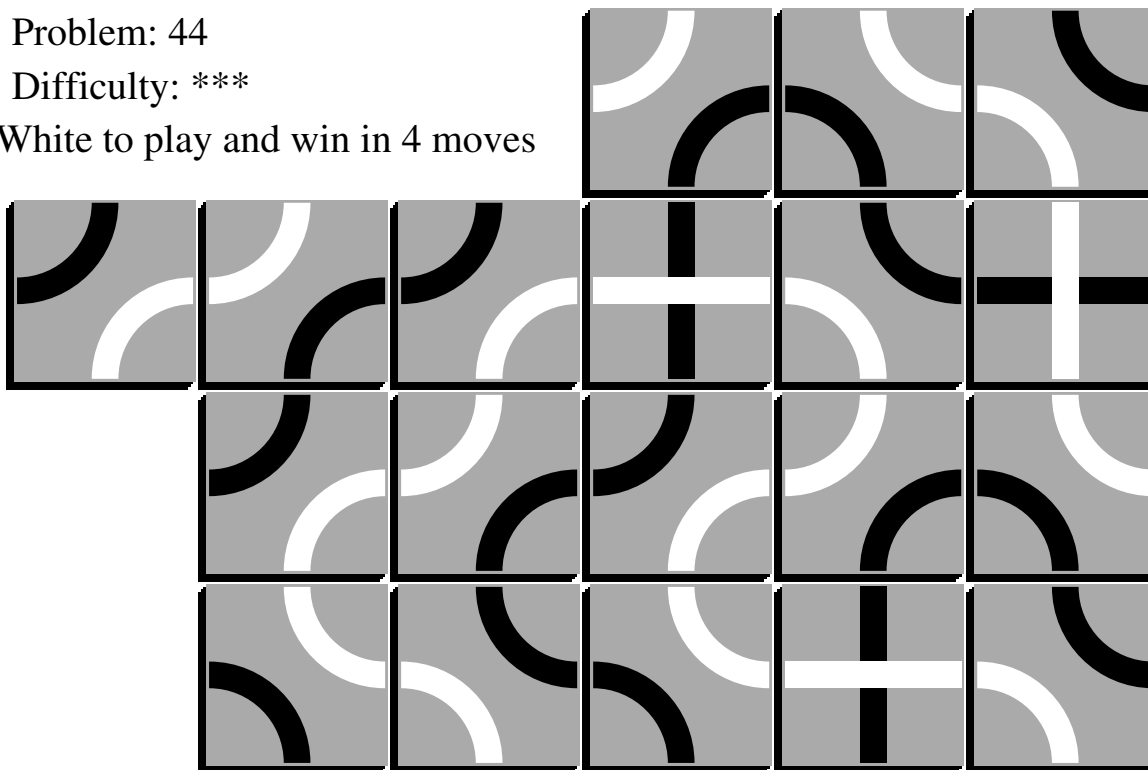
White to play and win in 6 moves



Problem: 44

Difficulty: ***

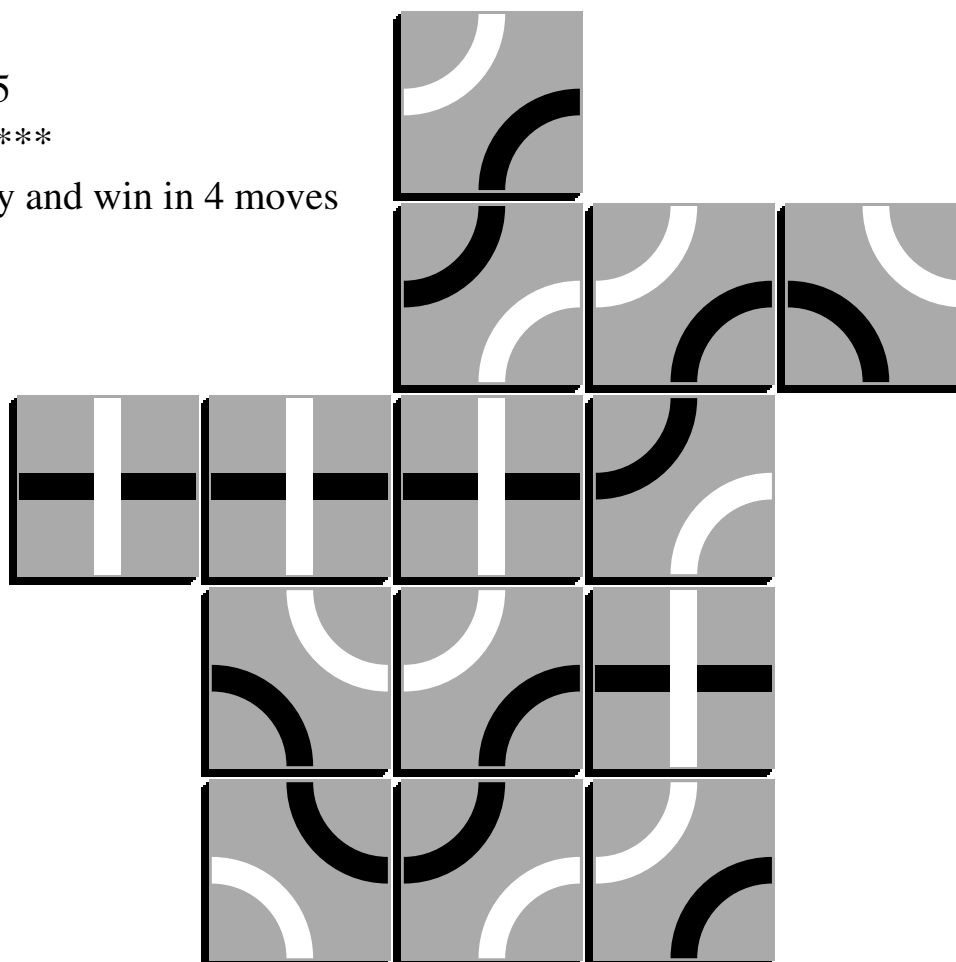
White to play and win in 4 moves



Problem: 45

Difficulty: ***

White to play and win in 4 moves

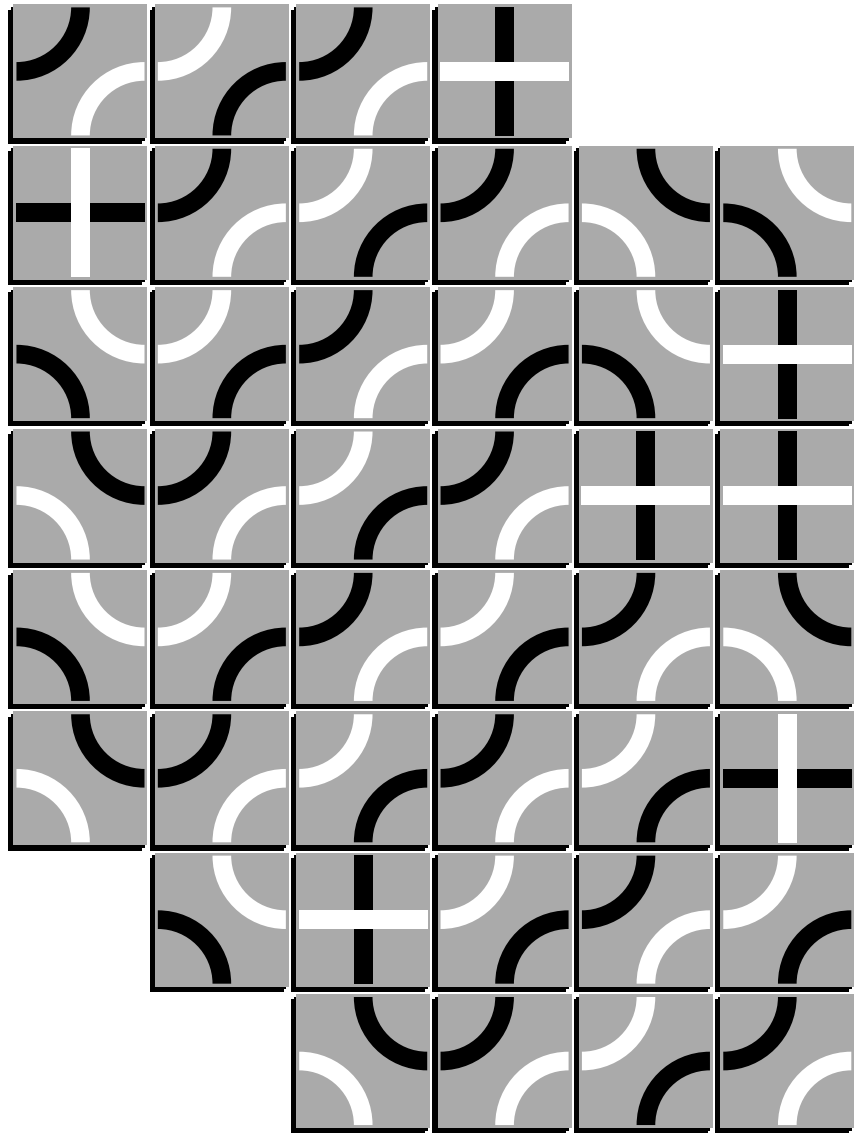


Problem: 46

LoopTrax

Difficulty: **

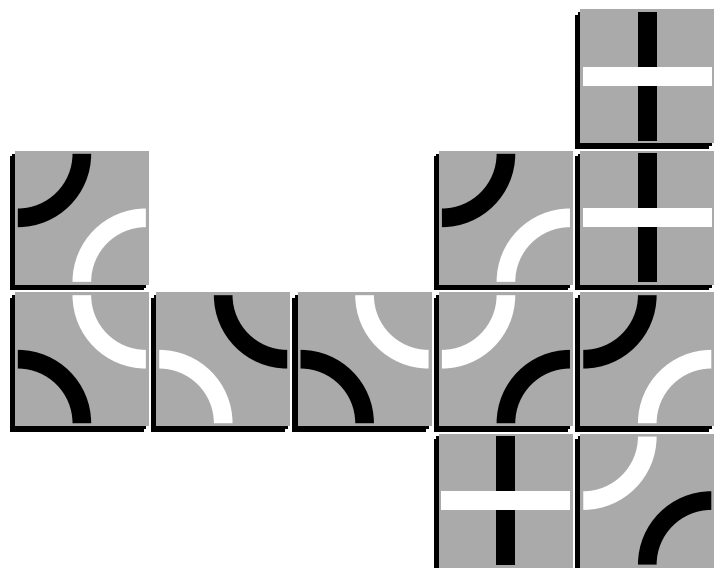
Black to play and win in 3 moves



Problem: 47

Difficulty: **

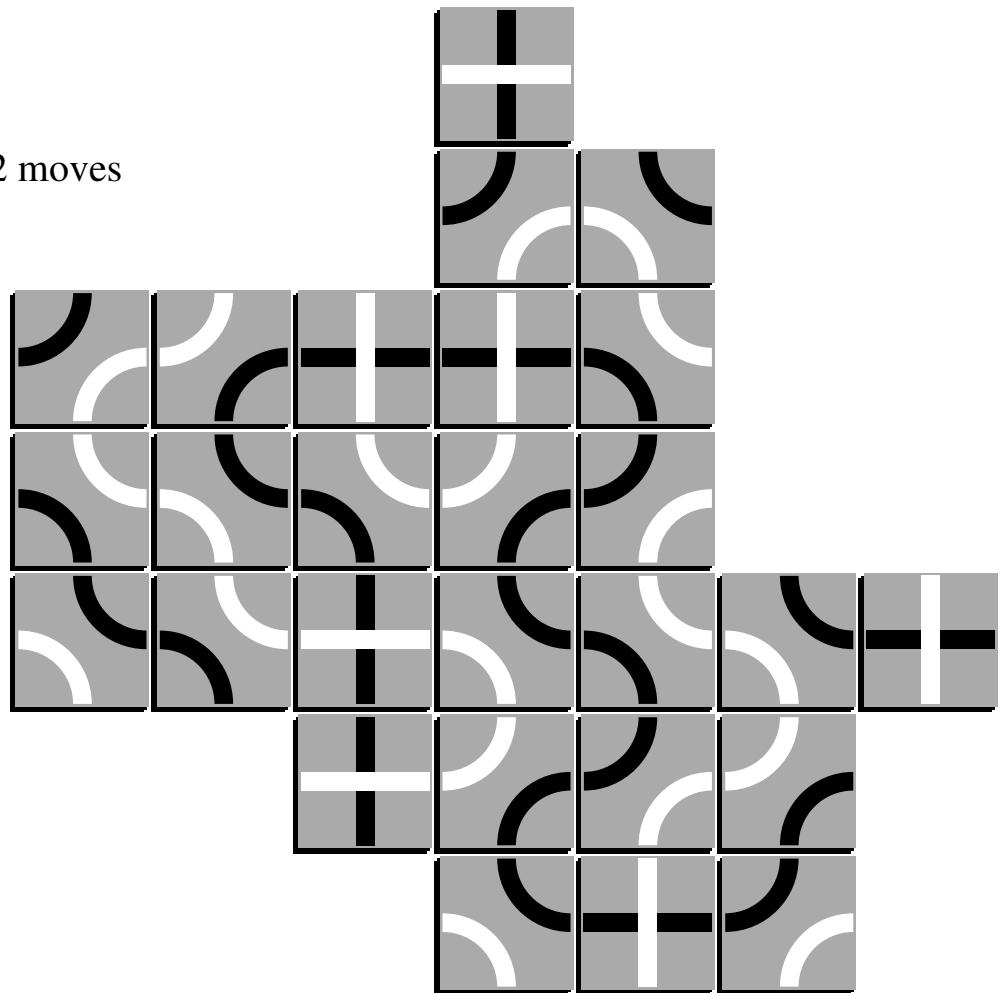
Black to play and win in 3 moves



Problem: 48

Difficulty: *

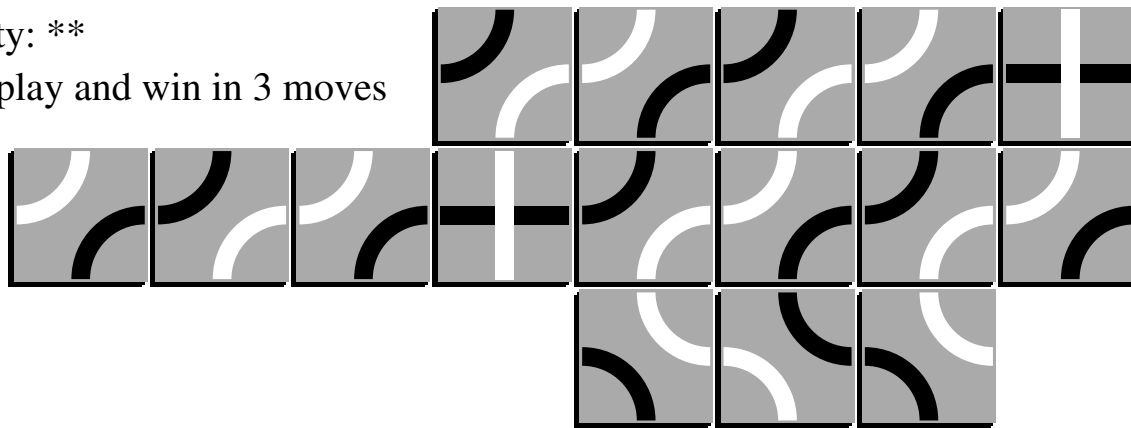
Black to play and win in 2 moves



Problem: 49

Difficulty: **

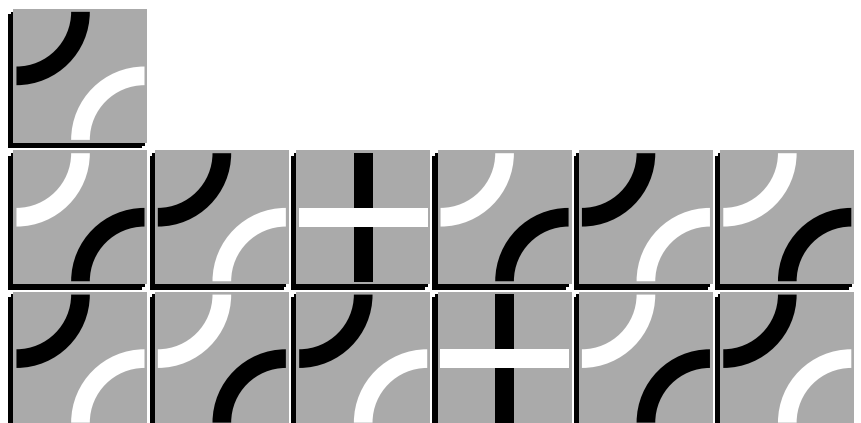
Black to play and win in 3 moves



Problem: 50

Difficulty: ***

Black to play and win in 4 moves



Appendix A

Boring Legal Stuff.

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With the understanding that:

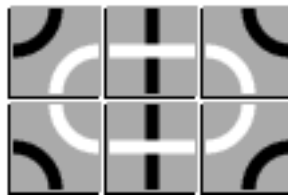
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Appendix B

Rules of Trax.

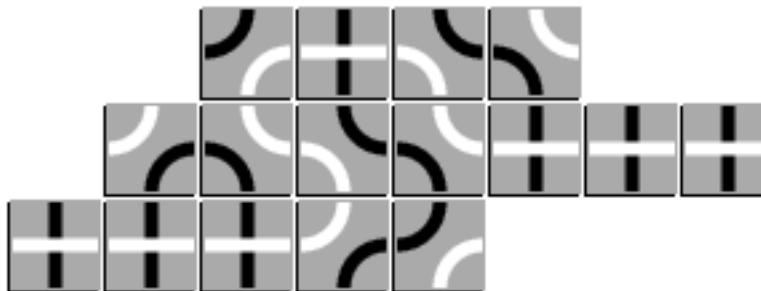
1. TRAX is played with identical square tiles on which sections of black and white track join adjacent edges on one side and opposite edges on the other side.
2. Two players determine by prior agreement who shall be represented by each coloured track.
3. The game is won by the player whose track forms a *loop* or a *line*
 - (a) during that player's completed turn or
 - (b) during an opponent's completed turn in which the opponent's track does not also form a loop or a line.
4. A **loop** is a continuous path of track that connects with itself.

A white loop:



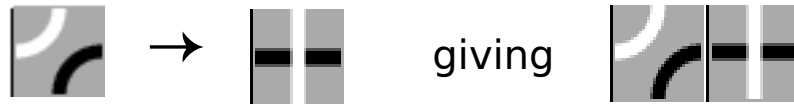
5. A **line** is a continuous path of track that connects opposite and outermost edges of the tiles in play, over at least 8 rows of tiles, across or down.

A horizontal white line:



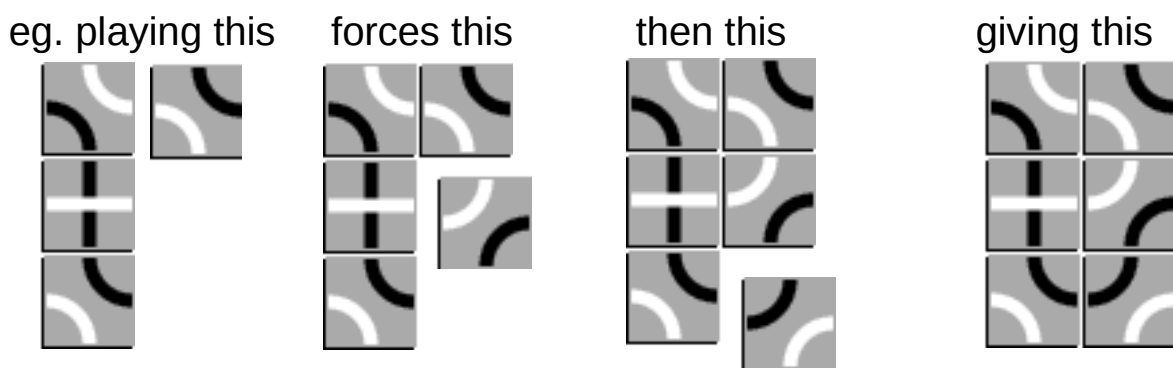
6. Commencing with the White player, each player at each turn places a tile, either side up, on any flat surface.

7. After the first turn, each tile must be placed edge to edge alongside any tile or tiles already in play so as to always join sections of same coloured track to each other. eg.



8. Each player may join track of either or both colours in any turn.

9. **Forced play** - If a tile played in any turn forms an adjacent space or spaces into which same coloured track enters from two edges, that same player must play a further tile into each such space so as to join up the same coloured track, be it white or black, as part of that turn. A forced play may itself require further forced plays to be made.



10. If a forced play forms an adjacent space into which same coloured track enters from more than two edges, that whole turn is illegal and uncomplete and must be replayed. This can happen but it rather rare.

11. **8x8 Trax** - By prior agreement, a version of TRAX may be played which is limited to 8 rows across and down. As these limits are reached, tiles must be played into remaining spaces until a win is achieved or all tiles that can be legally played have been played, in which case the game is drawn.

12. **LoopTrax** is another TRAX variant where forming a line doesn't win the game. All puzzles (except number 27) in this book is LoopTrax puzzles

Appendix C

Notation

1. Three symbols are used to record the location and orientation of the first tile played in each turn:

<column><row><orientation>

2. The first symbol is the column where occupied columns, counting from left to right, are lettered consecutively A to Z, AA to AZ, BA etc.

The column to the left of A is represented as @.

3. The second symbol is the row where occupied rows, counting from top to bottom, are numbered consecutively starting at 1.

The empty row above 1 is numbered 0.

4. The third symbol is the orientation of the tile that is played.

Use "+" for a straight tile, and either "/" or "\" for curves according to the orientation of the curved paths on the tile.

Use / for  and 

Use \ for  and 

Use + for  and 

Appendix D

Solutions

1:
@2/ A3/ E4\ any A4+ any WIN
 |
 B3/ E4\ any B4/ any WIN

2:
D2\ any E1/ any WIN

3:
C1\ any C5\ any F6\ any WIN

4:
C0/ any F1/ any F5\ any WIN

5:
C4/ D1/ E4\ any E1/ any WIN
 |
 C1+ C0/ D2/ E5\ any E2/ any WIN
 |
 D1/ E5\ any E1+ any WIN

6:
B5/ G5/ G4/ any D4/
 |
 G6\ G7\ any H6+ H5/ H4+ any D4/
 |
 G5/ G4/ any D4/

7:
C6+ any D3\ any WIN

8:
A0\ any G5+ any E1+ any G2/ any WIN

9:
A2\ any F5\ any F1/ any WIN

10:
E6+ any G5\ any G1+ any WIN

11:
B1\ any WIN

12:
B4\ C1+ C0/ D2/ E5\ any E2/ any WIN
 | |
 | D1/ E5\ any E1+ any WIN
 |
 D1/ E4\ any E1/ any WIN

13:
C5\ any A5/ any A2\ any WIN

14:
A0\ any E1+ any WIN

15:
B7\ any D8\ E8\ F8+ any WIN
 |
 E7+ F7\ any WIN

16:
@2\ A1\ @1\ any D3\ any A3/ any WIN
 |
 B1+ B0\ A2\ @2\ any D3\ any A3/ any WIN
 |
 A1\ A0\ any D1/ any WIN

17:
A1/ A0/ @1\ any C7\ any F7\ any WIN

18:
D3+ any E5\ any E1/ any WIN

19:
E1\ E2\ A3/ any F3+ any WIN
 |
 D2\ A3/ any E3\ any WIN

20:
C4+ D4\ A5/ any E5\ any WIN
 |
 E4\ A5/ ANY F5+ any WIN

21:
C0+ any E0/ any A1\ any WIN

22:
F2\ D2+ B7+
 any E3\

23:
F1+ any C0+ any WIN

24:
A0\ @1\ A0\ any D1/ any WIN
 |
 @2\ @2\ B1\ @3/ any A1\ any WIN
 |
 A1\ A4/ any C5\ D5\ E5+ any WIN
 |
 D4+ E4\ any WIN

25:
B0+ A2\ @6+ any A2\ any WIN
 |
 A1\ @6+ any A1+ any WIN

26:
 B4\ D4\ A5/ any E5\ any WIN
 |
 E4\ A5/ any F5+ any WIN
 |
 F4+ A5/ any H1/ any F6+ C6+ E6\ any H5\ any WIN
 |
 D6+ B7/ any H5\ any WIN
 |
 any H5\ any WIN

27:
 D0+ any WIN

28:
 G6+ any E7/ D6+ A6/ any WIN
 |
 D7/ A7+ any WIN

29:
 @2/ A3/ @3/ any A1\ any WIN
 |
 B3+ B4/ A3/ @3/ any A1\ any WIN
 |
 A4/ A5/ any A5\ any WIN

30:
 H4/ G5\ I1/ any G9+ H8\ I5+ any I8\ any WIN
 |
 any I4\ any I1/ any WIN

31:
 @4/ any F0/ G1+ B1+ C0\ A3+ any WIN
 | |
 | F0/ G4\ any A3+ any WIN
 |
 any B1+ any A3+ any WIN

32:
 G4+ any D1/ any A0\ any G1/ any WIN

33:
 A8+ any B4+ any WIN

34:
 D1\ any E1+ any WIN

35:
E4\ F4\ F5\ any D5\ any WIN
 |
 F3+ G3\ F4\ F5\ any D5\ any WIN
 |
 G4\ H5\ any H2/ any F1+ any WIN

36:
E1+ any WIN

37:
C1\ any D0/ any A1\ any WIN

38:
B4+ any C0+ A5/ @5+ any A1\ any WIN
 |
 A4/ @1\ any A4/ any WIN

39:
A0/ B0/ C0+ any WIN
 |
 B1+ C2/ any WIN

40:
E2+ D3\ A4/ any E4\ any WIN
 |
 E3\ E4+ any A4/ any WIN

41:
D5+ F5\ F6+ any B6/ any WIN
 |
 E5\ B6/ any E6\ any WIN

42:
F1/ any F4\ any C4+ any WIN

43:
E6\ H4/ I4/ any I6\ any WIN
 |
 G4/ G3/ H4/ I4/ any I6\ any WIN
 |
 H3/ I3+ G2+ G1\ any I7\ any WIN

44:
D5+ F5\ B6/ any F6+ any WIN
 |
 E5\ B6/ any E6\ any WIN

45:
E1/ any A5/ any A2\ any WIN

46:
@2/ any A8/ any WIN

47:
A1\ any C1+ any WIN

48:
A2\ any WIN

49:
A1+ any A4/ any WIN

50:
D1+ any F0/ any A1/ any WIN