



**WORLD FEDERATION
FOR CHESS COMPOSITION**

**10th WORLD CHESS COMPOSITION
TOURNAMENT 2016-2017**

ENTRIES
SECTION H: RETROS

July 2016

Judging countries

Finland, France, Germany, Japan, USA
(Sweden as reserve)

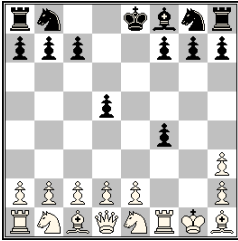
Theme

In an orthodox proof game several pieces exchange their places.

In position **A** in the course of proof game a number of pieces occupy a set of squares. Later in position **B** the same pieces occupy the same squares, but every piece stands on another square. It is allowed to have exchange between pieces of any color and any nature, direct or cyclic.

Position **A** may be an initial game array, though this is not required. Position **B** may be a final position of a proof game, but this is also not required. It is allowed to have additional promoted pieces in diagram position. The promoted piece is considered a unit different from original pawn.

H001

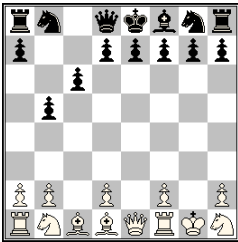


A 1.f4 d5 2.♘f3 ♙h3 3.gxh3 e5 4.♙g2 exf4 5.0-0 ♖h4 6.♙h1 ♔e1
7.♘xe1 **B**

A/B ♔e1 ↔ ♘g1, ♖h1 ↔ ♙f1

PG 6.5 (15+14)

H002

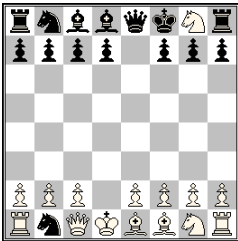


A 1.e4 b5 2.♘e2 ♙b7 3.♘g3 ♙xe4 4.♙e2 ♙xc2 5.0-0 ♙e4 6.♔e1
♙xg2 7.♙d1 ♙h1 8.♘xh1 c6 **B**

A/B ♔e1 → ♘g1 → ♖h1 → ♙f1 → ♔d1 → ♔e1 (cyclic)

PG 8.0 (13+15)

H003

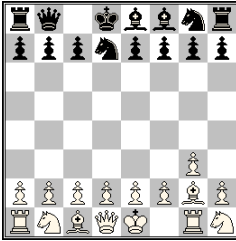


A 1.♘c3 ♘f6 2.♘d5 ♘e4 3.♘xe7 ♘xd2 4.♘g8 ♘b1 5.♙d2 ♙e7
6.♔c1 ♔f8 7.♔d1 ♔e8 8.♙e1 ♙d8 **B**

A/B ♘b1 ↔ ♘g8, ♔e1 → ♔d1 → ♙c1 → ♔e1 (cyclic), ♔e8 → ♙f8 → ♔d8 → ♔e8 (cyclic)

PG 8.0 (15+15)

H004



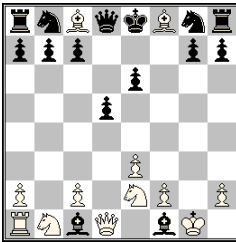
A 1. ♖f3 d5 2. ♖g1 d4 3. ♗xd4 ♙d7 **B** 4. ♗f5 ♚c8 5. ♗g3 ♙d8 6. ♗h1 **C** ♙e8 **D** 7.g3 ♗d7 8. ♙h3! (tempo) ♚b8 9. ♙g2 **E**

A/C ♖h1 ↔ ♗g1
A/D ♙e8 → ♚d8 → ♙c8 → ♙e8 (cyclic)
B/E ♙e8 → ♚d8 → ♗b8 → ♙d7 → ♙e8 (cyclic)

Tempo move 8. ♙h3
 Only one capture

PG 8.5 (16+15)

H005

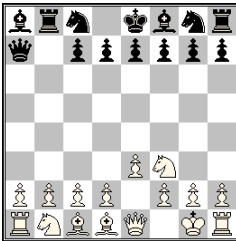


A 1.e3 d5 2. ♙d3 ♙h3 3. ♗e2 f5 4.0-0 ♙xg2 5. ♙xf5 ♙xf1 6. ♙c8 e6 7.b4 ♙xb4 8. ♙a3 ♙xd2 9. ♙f8 ♙c1 **B**

A/B ♙f1 ↔ ♙c8, ♙c1 ↔ ♙f8

PG 9.0 (12+15)

H006



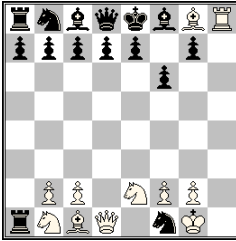
A 1.e3 a6 2. ♙xa6 ♗c6 3. ♙xb7 ♗a7 4. ♙f3 **B** ♙b7 5. ♙f1 ♚b8 6. ♙e1 ♗c8 7. ♙d1 **C** ♚a7 8. ♗f3 ♚b8 9. ♙g1 ♙a8 **D**

A/C ♚d1 → ♙e1 → ♙f1 → ♚d1 (cyclic)
A/D ♚a8 → ♗b8 → ♙c8 → ♚a8 (cyclic)
B/D ♚d1 → ♙e1 → ♗g1 → ♙f3 → ♚d1 (cyclic)

3 cyclic exchanges

PG 9.0 (16+14)

H007

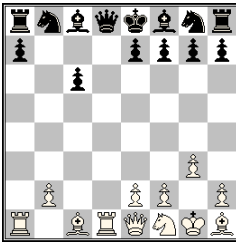


A 1.e4 ♖f6 2.♗d3 ♘xe4 3.♗e2 f6 4.0-0 ♗xd2 5.♗xh7 ♗xf1 6.♗g8 ♗xh2 7.a4 ♖h4 8.♗a3 ♗xa4 9.♖h3 ♗a1 10.♖h8 **B**

A/B ♖a1 ↔ ♖h8, ♗f1 ↔ ♗g8

PG 9.5 (11+15)

H008



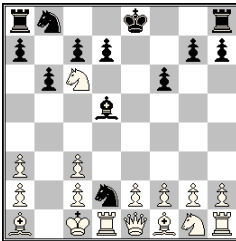
A 1.g3 d5 2.♗g2 d4 3.♗xb7 d3 4.♗f3 dxc2 5.0-0 ♗xd2 6.♗xd2 cxb1 ♗! 7.♖d1 ♗xa2 8.♗e1 ♗d5 9.♗d2 ♗d8! 10.♗h1 c6 11.♗f1! **B**

A/B ♗e1 → ♗g1 → ♗f1 → ♖h1 → ♗d1 → ♗e1 (cyclic)

Pronkin **B** ♗d8 (promoted queen returned to home square) and White castling
All black pieces on home squares

PG 10.5 (12+14)

H009

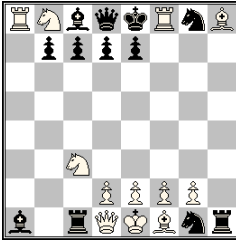


A 1.♗c3 b6 2.♗d5 ♗b7 3.♗xe7 ♗d5 4.♗c6 ♗a3 5.bxa3 ♗f6 6.♗b2 ♗c3 7.dxc3 ♗f6 8.♗d2 ♗e4 9.0-0 f6 10.♗e1 ♗d2 11.♗a1 **B**

A/B ♗e1 → ♗c1 → ♖a1 → ♗d1 → ♗e1 (cyclic)

PG 10.5 (16+13)

H010

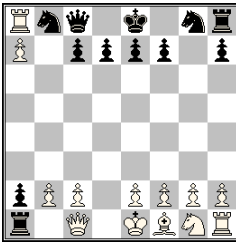


A 1.b4 g5 2.b5 g4 3.b6 g3 4.bxa7 gxh2 5.axb8 ♖hxg1 ♗ 6.♖xh7 ♖xa2
 7.♗xf7 ♖xc2 8.♙b2 ♙h1 9.♙h8 ♙g7 10.♖a8 ♙a1 11.♗c3 ♖c1
 12.♗f8 **B**

A/B ♖a1 → ♖a8 → ♙c1 → ♙h8 → ♖h1 → ♙f8 → ♖a1 (cyclic)

PG 11.5 (12+12)

H011



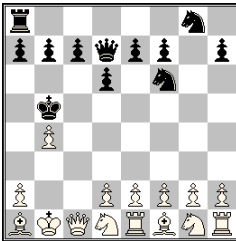
A 1.a4 b5 2.axb5 g6 3.♖a6 ♙h6 4.♗xg6 ♙xd2+ 5.♙xd2 a5 6.♙b4 axb4
 7.♗c1 ♖a1 8.♗a3 bxa3 9.♖a6 a2 10.♖a8 ♙a6 11.bxa6 ♗c8 12.a7 **B**

A/B ♖a1 ↔ ♖a8, ♙a2 ↔ ♙a7

Only 11.5 moves

PG 11.5 (13+12)

H012

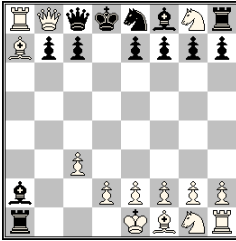


A 1.b4 d6 2.♙b2 ♙f5 3.♙xg7 ♙xc2 4.♙xh8 ♙g7 5.♗xc2 ♙c3 6.♗xc3
 ♗d7 7.0-0-0 ♗c6 8.♖e1 ♗d7 9.♗d1+ ♗b5 10.♙a1 ♗df6 11.♗b1
 ♗d7 12.♗c1 **B**

A/B ♗e1 → ♗b1 → ♗d1 → ♙c1 → ♖a1 → ♗e1 (cyclic)

PG 11.5 (15+12)

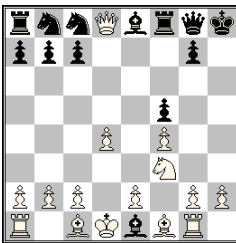
H013



PG 12.0 (14+13)

A 1. ♖c3 d5 2. ♗xd5 ♙f5 3.c3 ♜c8 4. ♜a4+ ♔d8 5. ♜xa7 ♗f6 6. ♜xb8 ♗e8 7. ♗f6 ♜xa2 8. ♗g8 ♜xb2 9. ♜a8 ♜a2 10. ♙a3 ♙b1 11. ♙c5 ♜a1
B 12. ♙a7 ♙a2#
A/B ♙e8 → ♜d8 → ♙c8 → ♗b1 → ♗g8 → ♙e8 (cyclic), ♜a1 ↔ ♜a8

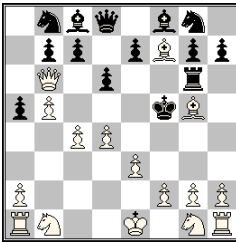
H014



PG 12.0 (15+13)

A 1. ♖c3 d5 2. ♗xd5 ♙d7 3. ♗xe7 ♗xe7 4.d4 ♗c8 5. ♜d3 ♙b4+ 6. ♙d1 ♙e1 7. ♜xh7 f5 8. ♜h4 0-0 9.f4 ♙e8 10. ♗f3 ♜d5 11. ♜d8 ♙h8 12. ♜g1 ♜g8 **B**
A/B ♙e8 → ♜h8 → ♙f8 → ♙e1 → ♜d1 → ♜d8 → ♗g8 → ♙c8 → ♙e8 (cyclic)

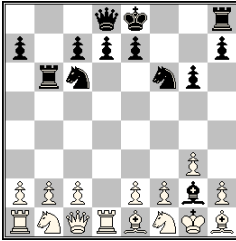
H015



PG 12.0 (16+14)

1.d4 a5 2. ♙g5 ♜a6 3.e3 ♜g6 4. ♙c4 d6 5. ♙xf7+ **A** ♙d7 6.c4 ♗h6 7. ♜b3 ♜g8 8. ♙xg8 ♗f7 **B** 9. ♜b6 ♙e6 10.b4 ♙f5 11.b5 ♗h6 12. ♙f7 ♗g8 **C**
A/B/C ♙f7 ↔ ♗g8 (twice)

H016



A 1.g3 f5 2.♗g2 f4 3.♙xb7 f3 4.♘xf3 g6 5.0-0 ♗h6 6.♖e1 ♗xd2
 7.♜fxd2 ♜f6 8.♙h1 ♙b7 9.♜f1 ♗g2 **B** 10.♙d2 ♜c6 11.♖c1 ♖b8
 12.♖d1 ♖b6 13.♙e1 **C**

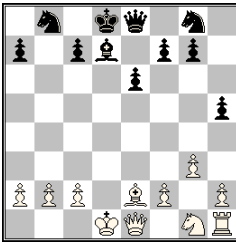
A/B ♖e1 → ♜g1 → ♗f1 → ♖h1 → ♖e1 (cyclic)

B/C ♖e1 → ♖d1 → ♗c1 → ♖e1 (cyclic)

A/C ♖e1 → ♜g1 → ♗f1 → ♖h1 → ♖d1 → ♗c1 → ♖e1 (cyclic)

PG 12.5 (15+13)

H017

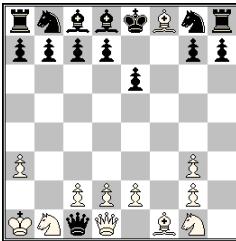


A 1.g3 h5 2.♗g2 ♖h6 3.♙xb7 ♖d6 4.Lxa8 ♖xd2 5.♙f3 ♖xe2+ 6.♙xe2
 e6 7.♙g5 ♙b4+ 8.♜d2 ♙xd2+ 9.♖xd2 ♖xg5 10.0-0 ♖e7 11.♖e1
 ♜d8 12.♖xd7+ ♙xd7 13.♜d1 ♖e8 **B**

A/B ♖e1 ↔ ♖d1, ♖e8 ↔ ♖d8

PG 13.0 (11+11)

H018

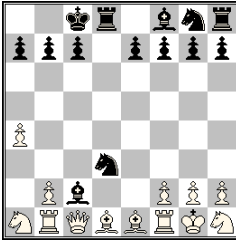


A 1.h4 f5 2.♖h3 f4 3.♖g3 fxg3 4.fxg3 e6 5.♖f2 ♙a3 6.♖e3 ♙xb2
 7.♖d3 ♙xa1 8.♙a3 ♙f6 9.♙f8 ♙xh4 10.♖c3 ♖e7 11.♖b2 ♖a3+
 12.♖a1 ♖c1 13.a3 ♙d8 **B**

A/B ♙c1 → ♙f8 → ♖d8 → ♙c1 (cyclic)

PG 13.0 (12+15)

H019



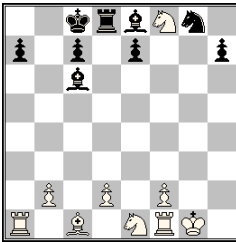
A 1.a4 ♖c6 2.♗a3 ♖d4 3.♙b1 ♖xe2 4.♗xe2 d5 5.♗g3 d4 6.♗e2 d3 7.0-0 dxc2 8.♗h1 ♙xd2 9.♗xd2 c1 10.♗c2 ♗f5 11.♗a1 ♗c2 12.♗e1 ♗d3 13.♙c1 0-0-0 14.♗d1 **B**

A/B ♙d1 → ♗c1 → ♗e1 → ♗g1 → ♙h1 → ♗f1 → ♙d1 (cyclic), ♙a1 ↔ ♗b1

Phoenix

PG 13.5 (13+14)

H020



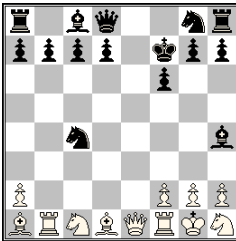
A 1.h4 b5 2.h5 b4 3.h6 b3 4.hxg7 bxa2 5.gxh8 ♗axb1 ♗ 6.♗xf7 ♗xc2 7.♗xd8 ♗xd1 8.♗c6 ♗xe2 9.♗xb8 ♗xf1 10.♗xd7 ♗xg2 11.♗xf8 ♗c6 12.♗f3 ♗8d7 13.0-0 0-0-0 14.♗e1 ♗e8 **B**

A/B ♗e1 ↔ ♗g1, ♗e8 ↔ ♗c8

The promoted W ♗ captures B ♙, the promoted B ♗ captures W ♙. White castles kingside, whereas Black castles queenside. The pieces on the exchange squares e1 and e8 are of the same kind as the promoted ones (♗ and ♗, respectively)

PG 14.0 (9+9)

H021

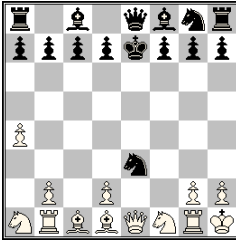


A 1.c4 ♗c6 2.♗c3 ♗d4 3.♙b1 ♖xe2 4.♗gx2 e5 5.♗g3 e4 6.♗e2 e3 7.0-0 exd2 8.♙e1 d1 ♗ 9.♗h1 ♗xb2 10.♗d1 ♗e7 11.♗e2 ♗xc4 12.♗b2 ♗h4 13.♗a1 f6 14.♗c1 **B** ♗f7

A/B ♗e1 → ♗g1 → ♙h1 → ♗f1 → ♙d1 → ♗e1 (cyclic), ♙a1 → ♗b1 → ♗c1 → ♙a1 (cyclic)

PG 14.0 (12+15)

H022

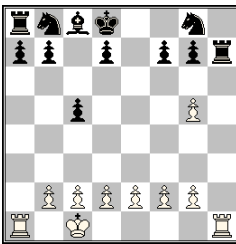


PG 14.0 (13+15)

A 1.a4 ♖c6 2.♗a3 ♗d4 3.♖b1 ♗xe2 4.♗xe2 e6! 5.♗g3 e5 6.♗e2 e4 7.0-0 e3 8.♗h1 exf2 9.♖g1 f1 ♗ 10.♖e1 ♗e3 11.♗f1 ♗xc2 12.♗d1 ♗e3 13.♗c2 ♗e7 14.♗a1 **B** ♖e8

A/B ♗e1 → ♖h1 → ♗g1 → ♗f1 → ♖e1 → ♗e1 (cyclic), ♖a1 ↔ ♗b1

H023



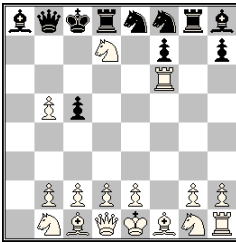
PG 14.5 (10+12)

A 1.♗c3 c5 2.♗d5 ♖a5 3.♗xe7 ♗xe7 4.h4 ♗g5 5.hxg5 ♖xa2 6.♖xh7 ♖b1 7.♖h6! (7.♖h4/h3?) ♖xc1 8.♖ha6 (8.♖ha4/a3?) ♖b1 9.♖xb1 ♖h1 10.♖a2 ♖xg1 11.0-0-0 ♖xf1 12.♖a5! ♖h1 13.♖d8+ ♗xd8 14.♖a1 ♖h7 15.♖h1 **B**

A/B ♖a1 ↔ ♖h1

Dual avoidance
Black and white queens move over the same squares
White queen makes three moves without capturing to be captured on d8

H024



PG 14.5 (16+11)

A 1.a4 b5 2.axb5 c5 3.♖xa7 ♖b6 4.♖xd7 ♗b7 5.♖d6 ♗d7 6.f4 0-0-0 7.f5 ♗a8 8.f6 ♖b8 9.fxe7 ♗gf6 10.e8 ♗ **B** ♗g8 11.♗xg7 ♗e8 **C** 12.♗h5 ♗g7 13.♗f6 **D** ♗f8 14.♗d7 **E** ♗h8 15.♖f6 **F**

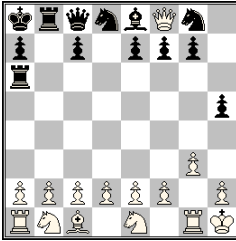
A/F ♗e8 → ♗c8 → ♖a8 → ♖d8 → ♗b8 → ♗f8 → ♖h8 → ♗g8 → ♗e8 (cyclic)

B/D ♗e8 ↔ ♗f6

C/E ♗g7 → ♗d7 → ♗f8 → ♗g7 (cyclic)

Black back rank permutation; four pieces involved in 2 exchanges, including a promoted piece (W ♗e8, B ♗f8, B ♗b8, B ♗g8); 2 doubly thematic moves (♗e8, ♗f8)
Round-trip (f6xe7-e8-g7-h5-f6); four moves to f6; long castling
Tries: 9.fxg7? 10.g8 ♗ 11.♗xe7+?, 12.♗e6? 13.♗f8? ♗xf8)
Dual avoidances by check, capture and being captured

H025

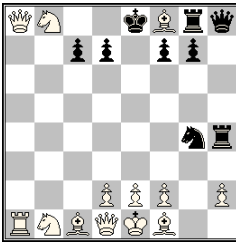


PG 14.5 (15+13)

A 1.g3 h5 2.♙g2 ♖h6 3.♙xb7 ♜a6 4.♙c6 ♙b7 5.♙xd7 ♜xd7 6.♙f3 ♘c6 7.0-0-0 8.♙h1 ♙b8 9.♜g1 ♙a8 10.♜f1 ♜b8 11.♜h3 ♜c8 12.♜d7 ♘d8 13.♜e8 ♙c6 14.♜xf8 ♙e8 15.♙e1 **B**

A/B ♙e8 → ♜a8 → ♘b8 → ♜d8 → ♙c8 → ♙e8 (cyclic), ♙e1 → ♜h1 → ♘g1 → ♙e1 (cyclic)

H026



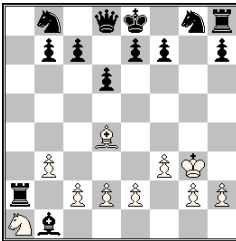
PG 15.0 (13+9)

1.a4 h5 2.a5 h4 3.a6 h3 4.axb7 hxg2 5.bxa8 ♜ ♙b7 6.c4 ♙d5 7.cxd5 gxh1 ♜ 8.d6 ♜xg1 9.dxe7 ♜g4 10.exf8 ♙ ♜h4 **A** 11.b4 ♘f6 12.b5 ♜g8 13.b6 ♜h8 14.bxa7 ♜h4 15.axb8 ♘ ♙g4 **B**

A/B ♜h8 → ♜g8 → ♘g4 → ♜h4 → ♜h8 (cyclic)

Mixed AUW: bxa8 ♜/gxh1 ♜/exf8 ♙/axb8 ♘

H027

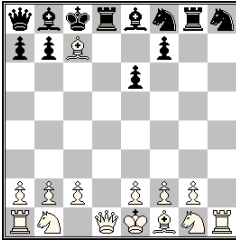


PG 15.0 (10+13)

1.♙f3 d6 2.♙d4 ♙e6 3.f3 ♙xa2 4.♙b3 ♙xb1 5.♜xa7 ♜xa7 6.♙a1 ♜a2 **A** 7.b3 ♜b2 8.♙f2 ♙a2 9.♙g3 ♜b1 **B** 10.♙b2 ♜xd1 11.♙xg7 ♜xf1 12.♙xf8 ♜b1 13.♙g7 ♜b2 14.♜b1 ♙xb1 15.♙d4 ♜a2 **C**

A/B/C ♜a2 ↔ ♙b1 (twice)

H028



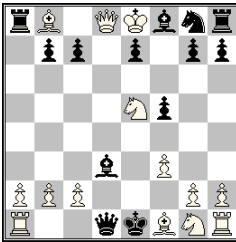
A 1.d4 e6 2.d5 ♖e7 3.d6 ♗g6 4.dxc7 ♜xc7 5.♜xd7+ ♗xd7 6.h4 ♗d6 7.h5 ♗df8 8.h6 ♗d7 9.hxg7 0-0-0 10.g8 ♜b8 11.♜xh7 ♜g8 12.♗f4 ♗h8 13.♜d3 ♜a8 14.♜d1 ♗b8 15.♗c7 ♗e8 **B**

A/B ♜d8 ↔ ♜a8; ♗b8 ↔ ♗f8; ♗e8 ↔ ♗c8; ♜h8 ↔ ♗g8

Pronkin

PG 15.0 (14+12)

H029



A 1.f3 d5 2.♗f2 **B** ♗d7 3.♗e3 d4+ 4.♗xd4 **C** ♗c6 5.♗e5 ♜xd2 6.♗a3 ♜xe2+ 7.♗e3 ♗f5 8.♜d8 ♜d1 9.♗xa7 ♗d3 10.♗xb8 f5 11.♗e6 ♗c5 12.♗d7 ♗d4 **D** 13.♗e8+ ♗e3 14.♗c4+ ♗f2 **E** 15.♗e5 ♗e1 **F**

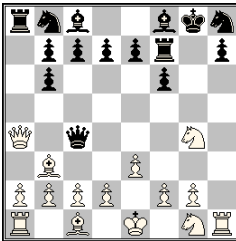
A/F ♜d1 ↔ ♜d8, ♗e1 ↔ ♗e8

B/E ♗f2 ↔ ♗e8

C/D ♗d4 ↔ ♗d7

PG 15.0 (14+13)

H030

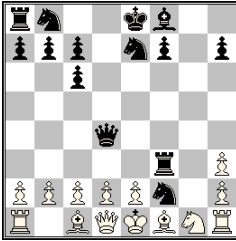


1.h4 f6 2.h5 ♗f7 **A** 3.h6 ♜e8 4.hxg7 ♗h6 5.g8 ♗g7 6.e3 ♗f7 7.♗h6 ♜g8 8.♜g4+ ♗h8 **B** 9.♜a4 ♜g7 10.♗g4 ♗g8 11.♗c3 ♗h8 12.♗c4+ ♗f7 13.♗b3 ♜c4 14.♗d5 ♜f7 **C** 15.♗b6 axb6

A/B/C ♗f7 → ♜h8 → ♗g8 → ♗f7 (cyclic, 2 times)

PG 15.0 (15+15)

H031



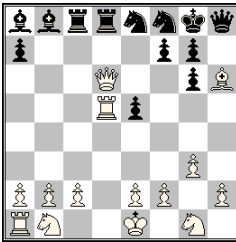
PG 15.5 (14+14)

A 1. ♖c3 g5 2. ♜d5 g4 3. ♜xe7 g3 4. ♜c6 dxc6 5. ♜f3 ♙h3 6.gxh3 ♜e7
7. ♙g2 ♜g8 8.0-0 gxf2+ 9. ♙h1 ♜g3 10. ♜e1 **B** f1 ♜ 11. ♙g1 ♜e3
12. ♜f2 ♜d4 13. ♜h1 ♜g4+ 14. ♜e1 **C** ♜f2 15. ♜g1 ♜f3 16. ♙f1

A/B/C ♙e1 ↔ ♜h1 (twice)

Switchback of ♙e1, ♙f1, ♜g1, ♜h1
Hidden castling (castling paradox)

H032



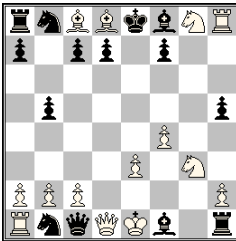
PG 16.0 (14+13)

A 1.d4 e5 2.d5 ♜h4 3.d6 ♜f6 4.dxc7 ♙d6 5.g3 0-0 6. ♙g2 ♜d8 7. ♙xb7
♜e8 8. ♙c6 ♙b7 9. ♙xd7 ♙xh1 10. ♙f5 ♜d7 11. ♙g6 hxg6 12.c8 ♜
♜h8 13. ♜c5 ♜ac8 14. ♙h6 ♙b8 15. ♜d6 ♙a8 16. ♜d5 ♜f8 **B**

A/B ♜a8 ↔ ♙c8, ♜b8 ↔ ♙f8, ♜d8 ↔ ♜h8, ♙e8 ↔ ♜g8

4 direct exchanges with a nice black back rank permutation, Phoenix
(9... ♙x♜h1, 12.c8 ♜); 6 moves pass or arrive at d5; short castling
Tries: 6. ♙h3? ♜d8 7. ♙xd7 ♜e8 8. ♙c6 ♜d7 9. ♙xb7 ♜f8 (too early)
10. ♙e4 ♙b7 11. ♙g6 hxg6 12.c8 ♜ ♜h8 13. ♜c5 ♜ac8 14. ♙h6 ♙b8
15. ♜d6 ♙xh1 16. ♜d5 – now the W ♜d5 makes 16... ♙a8 impossible;
11/12/13/14/15... ♜f8? - still too early; 9/10.c8 ♜? - black without useful
move; 11.c8 ♜? ♜f8 analogous to the first try; 14... ♙a8? 15. ♜d5 ♙b8
and now the w ♜d5 renders 16. ♜d6 impossible; 14/15. ♜d5?

H033

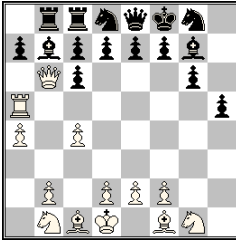


PG 16.0 (14+14)

A 1. ♖c3 ♜f6 2. ♜d5 ♜e4 3. ♜xe7 ♜xd2 4. ♜g8 ♜b1 5. ♙g5 ♜e7 6.f4
♜e3 7. ♙d8 ♜c1 8.e3 h5 9. ♙a6 b5 10. ♙e2 ♙b7 11. ♜g1 ♙xg2 12. ♙c8
♙f1 13. ♙xg7 ♙h6 14. ♜h7 ♙g6 15. ♜h8 ♜g1 16. ♜g3 ♜h1 **B**

A/B ♜b1 ↔ ♜g8, ♙c1 ↔ ♜d8, ♙f1 ↔ ♙c8, ♜h1 ↔ ♜h8

H034

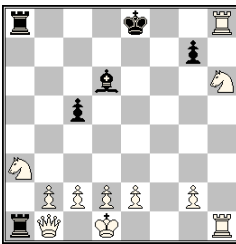


PG 16.0 (13+16)

1.g4 ♖c6 2.g5 ♖b8 3.g6 hxg6 4.h4 ♖h5 **A** 5.♖h3 ♖b5 6.h5 gxh5
 7.♖a3 g6 8.♖a5 ♖g7 9.a4 ♖f8 10.♖a3 ♖e8 11.♖c3 ♖d8 12.♖c6
 bxc6 13.c4 ♖a6 14.♖b3 ♖c8 15.♖d1 ♖bb8 16.♖b6 ♖b7 **B**

A/B ♖g6 → ♖h5 → ♖b8 → ♖c8 → ♖b7 → ♖c6 → ♖d8 → ♖e8 →
 ♖f8 → ♖g7 → ♖g6 (cyclic, 10 black pieces)

H035



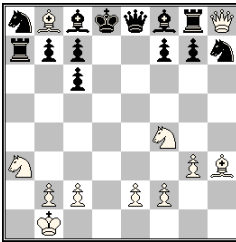
PG 16.5 (11+6)

A 1.a4 b5 2.axb5 c5 3.♖xa7 ♖c6 4.bxc6 ♖c7 5.cxd7+ ♖d8 6.dxc8 ♖
 ♖xh2 7.♖xe7 ♖wg1 8.♖xg8 ♖d6 9.♖xf7 ♖a1 10.♖a3 ♖xc1 11.♖xh7
 ♖a1 (switchback) 12.♖b1 ♖xf2+ 13.♖d1 ♖xf1+ 14.♖xf1 ♖d7
 15.♖h6 ♖a8 16.♖h1 ♖e8 (rundlauf) 17.♖h8+ **B**

A/B ♖a1 → ♖h1 → ♖h8 → ♖a8 → ♖a1 (cyclic)

Phoenix, switchback, black king rundlauf

H036



PG 17.0 (11+13)

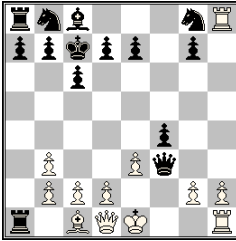
A 1.d3 e5 2.♖e3 e4 3.♖xa7 exd3 4.♖xd3 ♖h4 5.♖xh7 **B** ♖xh2 6.♖h3
 ♖e5 7.♖f4 ♖f6 8.♖h6 ♖g8 9.♖h8 ♖h7 10.♖c6 dxc6 11.g3 ♖d7
 12.♖b8 ♖xa2 13.♖h3 ♖a7 14.♖a3 ♖b6 15.0-0-0 ♖a8 16.♖d8+ ♖xd8
 17.♖b1 ♖e8 **C**

A/C ♖e8 ↔ ♖d8

B/C ♖h7 → ♖h8 → ♖g8 → ♖h7 (cyclic), ♖a7 → ♖b8 → ♖a8 → ♖a7
 (cyclic)

2 white units "buried" by anticlockwise cyclic permutation of 3 pieces in
 each of the corners a8 and h8; thematic exchange of black ♖ and ♖

H037



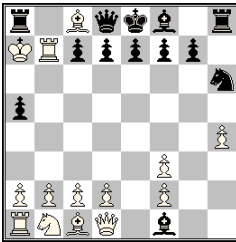
PG 17.0 (12+14)

A 1. ♖c3 h5 2. ♜e4 h4 3. ♜g3 hxg3 4. e3 gxf2 5. ♜e2 fxg1 ♜ 6. ♜e1 ♜xf1
7. ♜d1 B ♜f3 8. ♜e2 c6 9. ♜e1 ♜b6 10. ♜d1 ♜b3 11. axb3 f5 12. ♜a5 f4
13. ♜f5 ♜d8 14. ♜xf8 ♜c7 15. ♜f6 ♜h5 16. ♜h6 ♜a5 17. ♜h8 ♜a1 C

A/B/C ♜e1 ↔ ♜d1 (double exchange)

A/C ♜a1 ↔ ♜h8

H038

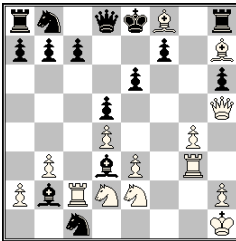


PG 17.0 (14+13)

A 1. a4 h5 2. a5 h4 3. a6 h3 4. axb7 hxg2 5. ♜h3 ♜xh3 6. bxc8 ♜ ♜b3 7. h4
♜c6 8. ♜h3 ♜bb8 9. ♜b3 ♜d4 (or ♜e5) 10. ♜b7 ♜f3+ 11. exf3 a5
12. ♜e2 ♜a6 13. ♜d3 ♜h6 14. ♜c4 ♜h8 15. ♜b5 ♜h6 16. ♜a6 gxf1 ♜+
17. ♜a7 ♜a8+ B

A/B ♜a8 ↔ ♜h8

H039



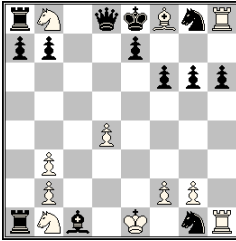
PG 17.0 (14+15)

1. d4 ♜h6 2. ♜xh6 d5 3. e3 ♜f5 4. ♜h5 ♜xc2 5. ♜d3 g5 6. ♜e2 g4 7. O-O
g3 8. ♜h1 gxf2 9. ♜g1 f1 ♜ 10. g4 ♜d2 11. ♜g3 ♜b3 12. ♜d2 e6 13. ♜c1
A ♜a3 14. ♜f8 h6 15. ♜h7 ♜d3 16. ♜c2 ♜c1 17. b3 ♜b2 B

A/B ♜c1 → ♜c2 → ♜d3 → h7 → ♜h6 → ♜f8 → b2 → ♜b3 → ♜c1
(come-and-go, cyclic)

Come-and-go permutation of 8 pieces (4W+4B), including a promoted knight

H040

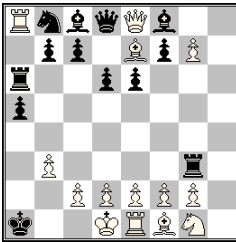


A 1. ♖f3 ♗c6 2. ♗e5 ♗d4 3. ♗xd7 ♗xe2 4. ♗b8 ♗g1 5. ♗d3 ♗e6
 6. ♗g6 ♗b3 7. axb3 hxg6 8. ♖a5 ♖xh2 9. ♖h5 ♖h4 10. ♖h8 ♖a4
 11. ♗h5 ♖a1 12. ♗h6 gxh6 13. d4 ♗g7 14. ♗f4 ♗f6 15. ♗xc7 ♗g5
 16. ♗e5 ♗c1 17. ♗g7 f6 18. ♗f8 **B**

A/B ♗g1 ↔ ♗b8, ♖a1 ↔ ♖h8, ♗c1 ↔ ♗f8

PG 17.5 (11+13)

H041

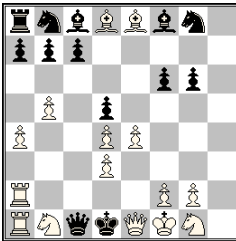


A 1. h4 a5 2. h5 ♖a6 3. h6 ♖g6 4. hxg7 h6 5. ♖xh6 ♖g3 6. ♖a6 ♖h6 7.
 ♖a8 ♖a6 8. b3 e6 9. ♗a3 ♗e7 10. ♗xe7 d6 11. ♗c1 ♗d7 12. ♗a3
 ♗c6 13. ♗a4 ♗c5 14. ♗e8 ♗b4 15. ♗a3 ♗xa3 16. 0-0-0 ♗xa2 17.
 ♗e1 ♗a1 18. ♗d1 **B**

A/B ♗e1 → ♗d1 → ♗e8 → ♖a1 → ♗e1 (cyclic)

PG 17.5 (14+13)

H042



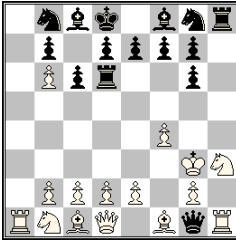
A 1. e4 h5 2. ♗hx5 g6 3. ♗a5 d5 4. a4 ♗d7 5. ♗b5+ ♗d6 6. ♗f1 ♗c5
 7. ♗e8+ ♗c4 8. d4 ♗d6 9. ♗g5 ♗xh2 10. ♗xe7 ♗f4 11. ♖h3 f6 12. ♖h3
 ♖h3 13. ♖3a2 ♖d3 14. cxd3+ ♗b3 15. ♗d8 ♗c2 16. b4+ ♗d1 17. b5
 ♗c1 18. ♗e1# **B**

A/B ♗c1 ↔ ♗d8, ♗e8 → ♗d1 → ♗e1 → ♗f1 → ♗e8 (cyclic)

The black ♗ and ♗ pay a visit to the 1st rank, while the white ♗s occupy their squares

PG 17.5 (15+13)

H043



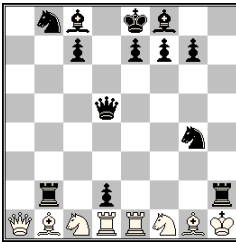
1.a4 a5 2.♖a3 ♗a6 3.♖g3 ♗d6 4.♗g6 hxg6 5.h4 ♗h5 6.♗h3 ♗b5
 7.axb5 a4 8.h5 a3 9.h6 a2 10.h7 a1 ♗ 11.h8 ♗ **A** ♗a4 12.♗h5 ♗h4 13.f4
 c6 14.♗f2 ♗b6+ 15.♗g3 ♗g1 16.b6 ♗d8 17.♗a5 ♗h8 18.♗a1 **B**

A/B ♗a1 ↔ ♗h8 (Pronkin)

Economic Pronkins

PG 17.5 (15+15)

H044



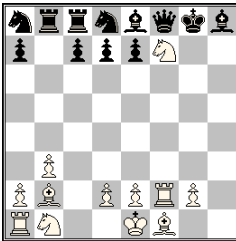
A 1.e4 a6 2.♗xa6 ♗f6 3.♗xb7 ♗xa2 4.♗e2 ♗xb2 5.0-0 ♗xc2 6.♗e1
 ♗xd2 7.♗a4 ♗b2 8.♗e3 ♗xe4 9.♗d2 ♗xf2 10.♗ad1 ♗g4 11.♗a1 d5
 12.♗f1 d4 13.♗e4 d3 14.♗xh7 d2 15.♗b1 ♗xh2 16.♗c1 ♗xg2+
 17.♗h1 ♗d5 18.♗g1 ♗h2+ **B**

A/B ♗a1 ↔ ♗d1, ♗b1 ↔ ♗f1, ♗c1 ↔ ♗g1, ♗e1 ↔ ♗h1

White turns his 1st rank inside out while losing all 8 pawns; switchbacks by both black ♗s along the 2nd rank

PG 18.0 (8+13)

H045



A 1.c4 ♗f6 2.c5 ♗d5 3.c6 ♗b6 4.cxb7 ♗xb7 5.f3 ♗xf3 6.h4 ♗c6 7.h5
 ♗c8 8.h6 ♗a8 9.hxg7 ♗xg7 10.♗xh7 0-0 11.♗h3 ♗h8 **B** 12.♗xf7 ♗h5
 13.♗f2 ♗f3 14.♗b3+ ♗xb3 15.♗g5 ♗bb8 16.b3 ♗f8 17.♗b2 ♗e8
 18.♗f7 ♗d8 **C**

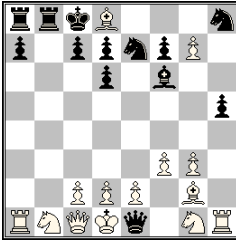
A/B ♗f8 ↔ ♗h8

A/C ♗a8 → ♗c8 → ♗e8 → ♗g8 → ♗a8 (cyclic), ♗b8 → ♗d8 → ♗f8
 → ♗h8 → ♗b8 (cyclic)

Cyclic shift of all black pieces two squares to the right

PG 18.0 (12+12)

H046

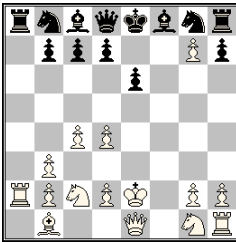


PG 18.0 (14+13)

A 1.h4 ♖c6 2.h5 ♘e5 3.h6 ♘g6 4.hxg7 h5 5.a4 ♖h6 6.a5 ♘h8 7.a6 ♜b6 8.axb7 ♜xb2 9.bxc8 ♘bb8 10.♘d6+ exd6 11.♙b2 ♜h4 12.♜c1 ♘d8 13.♙f6 ♙c8 14.♙d8 ♙e7 15.♘d1 ♙f6 16.f3 ♜f2 17.g3 ♘e7 18. ♙g2 ♜e1+ **B**

A/B ♙e1 → ♜d1 → ♙c1 → ♜d8 → ♙e1 (cyclic), ♜h8 ↔ ♘b8

H047

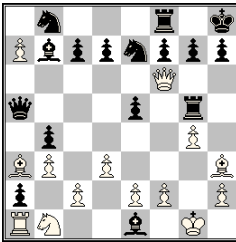


PG 18.5 (15+13) Ceriani-Frolkin (B♜♜)

A 1.f4 a5 2.f5 a4 3.f6 a3 4.fxg7 f5 5.e3 f4 6.♙d3 f3 7.♜e2 **B** f2+ 8.♙d1 f1 ♜+ 9.♜e1 **C** ♜f7 10.♙e2 **D** ♜b3 11.axb3 a2 12.♘a3 e6 13.♜b1 a1 ♜ **E** 14.c4 ♜a2 **F** 15.♜a1 ♜b1 **G** 16.♜a2 **H** ♜xc1 17.♙b1 ♜c3 18.♘c2 ♜d4 19.exd4

A/C ♜d1 ↔ ♙e1
B/D ♙e1 ↔ ♜e2
E/G ♜b1 ↔ ♜a1
F/H ♜b1 ↔ ♜a2

H048



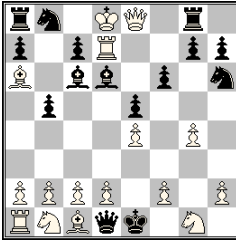
PG 18.5 (14+16)

A 1.d3 a5 2.♘d2 a4 3.♘b3 axb3 4.a4 ♜a5 5.♜a2 bxa2 6.b3 ♜g5 7.♙a3 b5 8.♜a1 ♙b7 9.♜f6 e5 10.♘f3 ♙b4+ 11.♘d2 ♜e7 12.g4 ♜c5 13.♙h3 ♘e7 14.0-0-0 15.♜a1 ♙h8 16.♘b1 ♙e1 17.a5 b4 18.a6 ♜a5 19.a7 **B**

A/B ♙a2 ↔ ♙a7

Two impostors (♜a1 and ♘b1)

H049

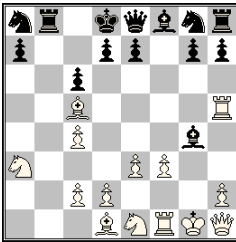


PG 18.5 (16+15)

A 1.e4 e5 2.♖a6 ♗e7 3.♗e2 ♗f6 4.♗d3 ♗g5 5.♖h5 ♗f4 6.g4 ♖f6
 7.♗h3 ♗f3 8.♗c4 ♗e2 9.♖g1 ♖f3 10.♖g3 ♗e1 11.♗g1 ♖d1 12.♖d3
 f6 13.♖xd7 b5 14.♗d5 ♗b7 15.♗e6 ♗c6 16.♗f7 ♗h6 17.♗e8 ♖g8
 18.♗d8 ♗d6 19.♖e8 **B**

A/B ♗e1 → ♖d8 → ♖d1 → ♗e8 → ♗e1 (cyclic)

H050



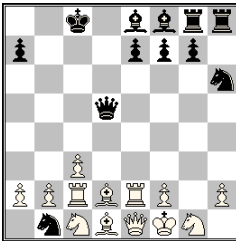
PG 19.0 (14+14)

A 1.e3 f5 2.♖f3 f4 3.♖xb7 f3 4.♗e2 fxg2 5.♗f3 g1 6.♗d1 ♗e2 7.a4
 ♗c3 8.0-0 ♗a6 9.♗e1 ♖b8 10.♖h1 c6 11.a5 ♖xa5 12.bxc3 ♖h5
 13.♖a5 ♗d8 14.♗a3 ♖e8 15.♖h5 ♗c7 16.♗c5 ♗a6 17.♗a3 ♗e2
 18.c4 ♗g4 19.f3 ♗a8 **B**

A/B ♖d1 → ♖h1 → ♗f1 → ♖d1 (cyclic), ♗e1 ↔ ♗g1, ♖d8 ↔ ♗e8,
 ♖a8 ↔ ♗b8

Ceriani-Frolkin (B ♗)

H051



PG 19.5 (13+12)

A 1.d4 h5 2.d5 h4 3.d6 h3 4.dxc7 hxg2 5.cxb8 ♖gxh1 ♗ 6.♖xb7 ♗g3
 7.♖xd7 ♗xe2 8.♖d2 **B** ♗c3 9.♗e2 ♖d5 10.♗f1 ♗d7 11.♖e1 0-0-0
 12.♗d1 ♗e8 13.♖e2 ♖d6 14.♗d2 ♖dh6 **C** 15.♗b3 ♖6h7 16.♗d2
 ♗h6 17.♖c1 ♗b1 18.c3 ♖g8 19.♖c2 ♖7h8 20.♗c1 **D**

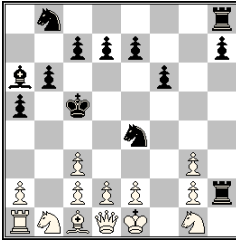
A/D ♗e1 → ♗f1 → ♖d1 → ♗e1 (cyclic), ♗e8 ↔ ♗c8

B/D ♗b1 → ♗c1 → ♖d2 → ♗e2 → ♗b1 (cyclic)

C/D ♖h8 → ♗g8 → ♖h6 → ♖h8 (cyclic), ♗c1 ↔ ♗d2

Phoenix
 Rundlauf with promotion

H052



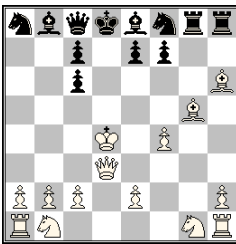
PG 19.5 (13+13)

A 1.f4 ♖f6 2.f5 ♜e4 3.f6 a5 4.fxg7 ♙xg7 5.♜f3 ♙c3 6.bxc3 ♖a6 7.♙a3 ♖f6 8.♗c1 b6 9.♙d1 ♙a6 10.♜e1 ♜xf1 11.♙c5 ♜xh1 12.♙g1 **B** f6 13.♜f3 ♙f7 14.♙e1 ♗g8 15.♗d1 ♗g3+ 16.hxg3 ♜h2 17.♙c5 ♙e6 18.♙a3 ♙d5 19.♙c1 ♙c5 20.♜g1 **C**

A/B ♙e1 → ♗d1 → ♙c1 → ♜g1 → ♙e1 (cyclic)

B/C ♙d1 → ♜e1 → ♙g1 → ♗c1 → ♙d1 (cyclic, switchback)

H053

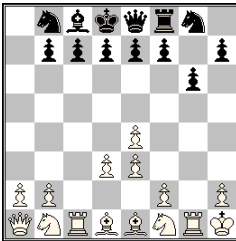


PG 19.5 (14+12)

A 1.g4 ♜f6 2.♙g2 ♜g8 3.♙xb7 ♜d5 4.♙c6 dxc6 5.g5 ♙d7 6.g6 ♗c8 7.gxh7 ♙d8 8.h8 ♙e8 9.♙xg7 ♜d7 10.♙d4 ♙g7 11.♙xa7 ♜f8 12.♙e3 ♜a5 13.d4 ♙xd4 14.♙d2 ♙a7 15.♙d3 ♜b6 16.♙d4 ♜h5 17.♗d3 ♜h8 18.♙h6 ♙b8 19.♙cg5 ♜a8 20.f4 **B**

A/B ♜a8 → ♜h8 → ♜g8 → ♜a8 (cyclic), ♙c8 → ♙e8 → ♗d8 → ♙c8 (cyclic), ♜b8 ↔ ♙f8

H054



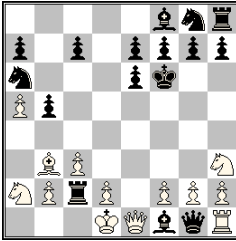
PG 19.5 (15+13)

A 1.e4 a5 2.♜e2 ♜a6 3.♜ec3 ♜g6 4.♙e2 ♜f6 5.0-0 ♗xg2+ 6.♙h1 ♜g3 7.♙g1 ♜d3 8.cxd3 g6 9.♗c2 ♙h6 10.♙d1 ♙e3 11.dxe3 ♙f8 12.♜d2 ♙g7 13.♜f1 ♗g8 14.♙d2 ♙f8 15.♜c1 ♙e8 16.♗b1 ♙d8 17.♗a1 ♗e8 18.♜b1 ♜f8 19.♙xa5 ♜g8 20.♙e1 **B**

A/B ♙e8 ↔ ♗d8, ♙e1 → ♜h1 → ♜g1 → ♜b1 → ♙f1 → ♗d1 → ♜a1 → ♙c1 → ♙e1 (cyclic)

Impostor knight at b1

H055

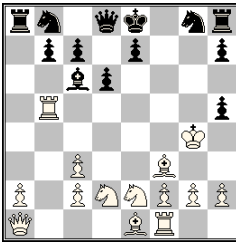


PG 19.5 (13+16)

A 1.e4 b6 2.e5 ♖a6 3.e6 dxe6 4.♙c4 ♖d3 5.♗e2 ♔d7 6.♙d1 ♙d6
 7.♗e1 **B** ♗f1 8.♞h3 ♗g1 9.♙b3 ♙f1 10.♗e2 ♞a6 11.♙e1 ♖d8
 12.♗d1 **C** ♙e5 13.a4 ♗d4 14.a5 ♖a4 15.♞c3 ♞xa1 16.♞a2 ♗xc1
 17.c3 ♗c2 18.♗e2+ ♙f6 19.♙d1 b5 20.♗e1 **D**

A/B/C/D ♙e1 ↔ ♗d1 (3 times)

H056



PG 20.0 (14+13)

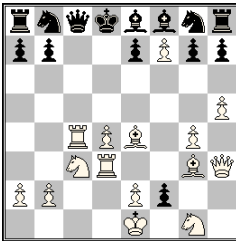
A 1.e4 d6 2.e5 ♗d7 3.e6 ♙d8 4.exf7 ♗e8 **B** 5.fxe8 ♙a5 6.♙h5 g6
 7.♙e2 ♙g7 8.♙f3 ♙c3 9.dxc3 a4 10.♙d2 a3 11.♙e1 axb2 12.♞d2
 b1 ♗ 13.♙e2 ♗b5 14.♖b1 ♗e8 **C** 15.♙b5 ♙d7 16.♗a1 ♙c6+ 17.♙g4
 ♙d7 18.♙f3 ♗d8 19.♞e2 ♙e8 **D** 20.♗f1 gxh5+

A/B ♙e8 ↔ ♗d8 (original)

C/D ♙d8 ↔ ♗e8 (promoted)

Moving counterclockwise in the d8-d7-e8 triangle, the black king exchanges places first with the original black queen and then with a promoted one. In the diagram position nothing hints at the previous black king-and-queen 'waltzing'

H057



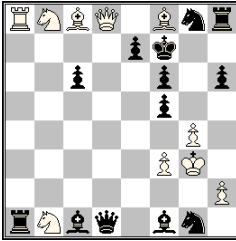
PG 20.0 (15+14)

A 1.h4 c5 2.h5 c4 3.♞h4 c3 4.♞c4 d5 5.g4 d4 6.♙g2 d3 7.♙e4 dxc2 8.d4
 f5 9.♗d3 f4 10.♗h3 f3 11.♙f4 c1 ♙ 12.♙g3 c2 13.♞c3 ♙f4 14.♖d1
 c1 ♙ 15.♞d3 ♙ce3 16.fxe3 ♙d7 17.exf4 ♗c8 18.f5 ♙d8 19.f6 ♙e8
 20.f7 f2+ **B**

A/B ♙f2 ↔ ♙f7, ♙e8 → ♗d8 → ♙c8 → ♙e8 (cyclic)

Two Ceriani-Frolkin with promotions on the same square

H058

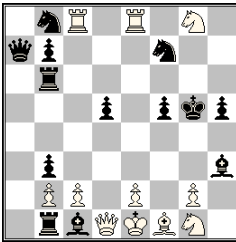


PG 20.5 (10+13)

A 1. ♖f3 ♜c6 2. ♜e5 ♜d4 3. ♜xd7 ♜xe2 4. ♜b8 ♜h3 5.g4 f5 6. ♜g2 ♜f7 7. ♜xb7 c6 8.f3 ♜xd2+ 9. ♜f2 ♜xc2 10. ♜d8 ♜d1 11. ♜e1 ♜g1 12. ♜e6 ♜f1 13. ♜f6+ gxf6 14. ♜e3 ♜h6 15. ♜xa7 ♜c1 16. ♜e3 ♜xa2 17. ♜g3 ♜xb2 18. ♜a8 ♜a2 19. ♜h6 ♜a1 20. ♜f8 h6 21. ♜c8 **B**

A/B ♜a1 ↔ ♜a8, ♜c1 ↔ ♜f8, ♜d1 ↔ ♜d8, ♜f1 ↔ ♜c8, ♜g1 ↔ ♜b8 (exchange of places between five similar types of white and black officers)

H059



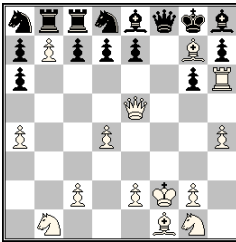
PG 21.0 (11+13)

1.h4 a5 2. ♜h3 a4 3. ♜b3 axb3 4.d4 ♜xa2 5.d5 ♜xa1 6.d6 ♜xb1 7.dxc7 d5 8.h5 ♜h3 9.c8 ♜b6 10.h6 ♜a7 11.hxg7 h5 12.f4 ♜h6 13.f5 ♜b6 14.f6 ♜h6 15.fxe7 f5 16.g8 ♜c7 17.e8 ♜A ♜f6 18. ♜e7 ♜f7 19. ♜c8 ♜h6 20. ♜ge8 ♜xc1 21. ♜g8+ **B** ♜g5

A/B ♜g8 → ♜e8 → ♜c8 → ♜g8 (cyclic, promoted pieces)

Phoenix, Echo-Excelsior's, White homebase for unthematic pieces

H060



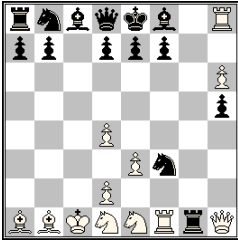
PG 21.0 (14+15)

A1.h4 ♜f6 2. ♜h3 ♜d5 3. ♜a3 ♜b6 4. ♜a6 bxa6 5.a4 ♜b7 6. ♜a3 ♜d5 7. ♜f3 ♜c6 8. ♜xf7 ♜c8 9. ♜f6 ♜a8 10. ♜h6 g6 11.b4 ♜g7 12. ♜b2 0-0 13. ♜c1 ♜h8 14. ♜g7 ♜xf2 15.d4 ♜f5 16. ♜f4 ♜f7 17. ♜f2 ♜b5 18. ♜e5 ♜b8 19.b5 ♜f8 20.b6 ♜d8 21.b7 ♜e8+ **B**

A/B ♜a8 → ♜c8 → ♜e8 → ♜g8 → ♜a8 (cyclic), ♜b8 → ♜d8 → ♜f8 → ♜h8 → ♜b8 (cyclic)

Cyclic shift of all black pieces two squares to the right
Only one black piece is captured

H061



PG 21.0 (12+14)

A 1.e3 c5 2.♖h5 c4 3.♘f3 c3 4.♗g1 cxb2 5.♘c3 b1 ♘6.♘b2 ♘xa2
 7.0-0-0 ♘c4 8.♘a1 ♘d3 9.cxd3 g5 10.d4 g4 11.♘d3 g3 12.♘b1 gxf2
 13.g4 f1 ♘ 14.g5 ♘hx2 15.♗df1 h6 16.♘e1 ♘f3 17.♗h1 h5 18.♘d1 **B**
 ♘h6 19.gxh6 ♗h7 20.♗g8 ♗g7 21.♗h8 ♗g1 **C**

A/B ♘e1 → ♘c1 → ♗a1 → ♘f1 → ♘b1 → ♗d1 → ♗h1 → ♘g1 →
 ♘e1 (cyclic)

A/C ♘e1 → ♘c1 → ♗a1 → ♘f1 → ♘b1 → ♗d1 → ♗h1 → ♗h8 →
 ♘g1 → ♘e1 (cyclic)

B/C ♗g1 ↔ ♗h8

8-fold cyclic exchange extended by an additional exchange to a 9-fold cycle

White back rank permutation with pieces lexicographically sorted by their English names

Ceriani-Frolkin (5...b1 ♘, 9.cx♘d3)

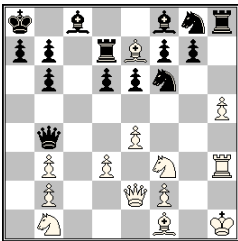
Anticipated Phoenix (13...f1 ♘, 19.gx♘h6)

Tempo move (15...h6)

2/3 Valladao, where the e.p. capture is impossible because of a previous tempo move, with a similar capture later

Long castling

H062



PG 21.5 (13+15)

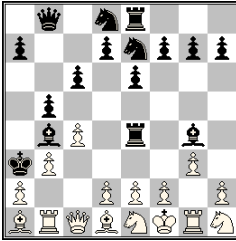
1.c4 d6 2.c5 ♘e6 3.c6 ♘b3 4.axb3 h5 5.♗a6 h4 6.♗b6 cxb6 7.c7 h3
 8.c8 ♘ hxg2 9.h4 gxf1 ♘ **A** 10.♘h3 e6 11.h5 ♗h4 12.♘f3 ♗b4 13.e4
 ♘b5 14.♗e2 ♘d7 15.♘f1 **B** 0-0-0 16.d3 ♘b8 17.♘g5 ♘a8 18.♘e7
 ♘df6 19.♘g1 ♘d7 20.♘f1 ♘c8 **C** 21.♗h3 ♗d7 22.♘h1 **D**

A/C ♘c8 ↔ ♘f1

B/D ♘h3 → ♘f1 → ♗h1 → ♘h3 (cyclic)

Exchange between two promoted bishops with 2x Pronkin
 Additional white 3-fold cycle

H063



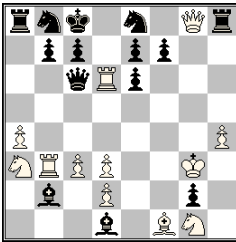
A 1. ♖c3 b5 2. ♗e4 ♘b7 3. ♗g3 ♙f3 4. ♗b1 ♙g4 **B** 5. ♗f3 ♗c6 6. ♖g1 ♗b8 7. ♗h1 ♗b6 8.g3 ♗b8 9. ♙g2 ♗d8 10. ♗f1 ♗e6 11. ♗e1 **C** c6 12. ♙d5 ♗e4 13. ♙b3 e6 14.c4 ♗e7 15. ♙c2 ♗d6 16.b3 ♗c5 17. ♙b2 ♗b4 18. ♙a1 ♗a3 19. ♗b2 ♗b4 20. ♗c1 ♗e7 21. ♙d1 ♗e8 22. ♗b1+ **D**

B/C ♗d8 ↔ ♗b8, ♗e1 → ♙f1 → g2 → ♗g3 → ♗h1 → ♗g1 → ♗e1 (come-and-go, cyclic)

A/D ♗e1 → ♙f1 → ♗d1 → ♙c1 → ♗a1 → ♗b1 → ♗h1 → ♗g1 → ♗e1 (cyclic)

PG 21.5 (16+16) Unbroken permutation of 8 white pieces in first rank
Come-and-go permutation of 6 white pieces
Exchange of B ♗ and B ♗

H064



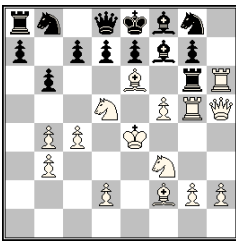
A 1.f4 a5 2.f5 a4 3.f6 a3 4.fxg7 ♗f6 5.g8 ♗axb2 6. ♗g4 bxc1 7. ♗e6 dxe6 8.h4 ♙d7 9. ♗h3 ♙a4 10. ♗d3 ♗d7 11. ♗d6 ♗d3+ 12.exd3 ♗d8 13. ♗g4 ♗e8 14. ♗g8 ♙g7 15.g4 ♙b2 16.c3 ♙d1 17.a4 h5 18. ♗a3 hxg4 19. ♗b3 g3 20. ♗a3 g2 21. ♗f2 ♗c8 22. ♗g3 ♗c6 **B**

A/B ♗d1 → ♗g8 → ♗e8 → ♙c8 → ♗d1 (cyclic)

Anti-Pronkin (W ♗)
Ceriani-Frolkin (B ♗)

PG 22.0 (12+14)

H065



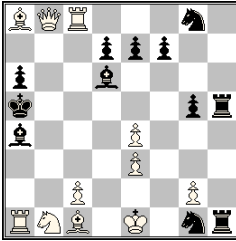
1.b4 f5 2. ♙b2 f4 3. ♙d4 f3 4. ♗c3 fxe2 5.f4 h5 6. ♗f2 e1 ♗7. ♙c4 ♗h6 8. ♗xh5 ♗g6 9. ♗f3 ♗b1 10. ♗e1 ♗b3 11.axb3 b6 12. ♗a5 ♙b7 13. ♗g5 ♙d5 14.f5 ♙f7 **A** 15. ♗e6 ♗f6 16. ♗e3 ♙g6 17. ♗e4 ♗f7 **B** 18. ♗f2 ♙h7 19. ♗h6 ♙g6 20. ♙e6 ♗f6 21. ♗d5 ♙f7 22.c4 ♗g6 **C**

A/B/C ♙f7 ↔ ♗g6 (double exchange)

Come-and-go Platzwechsel (Lois Theme) by B ♗ & B ♙ on the pinning line. The feature is shown by a continuous eight moves sequence that closes the game. Probably the first mono-color rendition on squares other than home-squares
B ♗ Ceriani-Frolkin

PG 22.0 (15+14)

H066

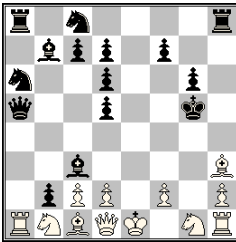


1.e4 h5 2.♖g4 hxg4 3.b4 g3 4.b5 gxh2 5.b6 hxg1 ♘6.bxa7 ♖xh1
 7.axb8 ♖a5 8.a4 ♖ah5 9.a5 g5 10.a6 ♗g7 11.a7 ♗e5 12.♗a6 bxa6
 13.d4 ♗b7 14.d5 ♗c6 15.d6 ♗a4 16.dxc7 ♗d6 17.c8 ♗ ♖b6 18.a8 ♖ A
 ♖e3+ 19.fxe3 ♗d8 20.♗b7+ ♗c7 21.♖c8+ ♗b6 22.♖b8 ♗a5 23.♗a8
 B

A/B ♗c8 → ♖a8 → ♖b8 → ♗c8 (cyclic, promoted pieces)
 Phoenix, AUW

PG 22.5 (11+12)

H067

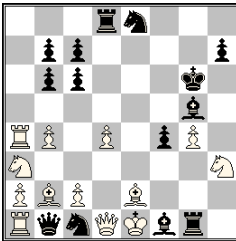


A 1.g4 a5 2.g5 a4 3.g6 a3 4.gxh7 axb2 5.a4 ♖a6 6.a5 ♖h6 7.a6 g6 8.a7
 ♗g7 9.a8 ♖c3 10.♖a3 ♗a6 11.♖d6 exd6 12.e4 ♖g5 13.e5 ♗e7
 14.e6 ♗f6 15.e7 ♖a5 16.e8 ♖g5 17.♖e4 ♗e7 18.♖c6 bxc6 19.♗g2
 ♗b7 20.♗h3 ♖a8 21.h8 ♖c8 22.♖d4 ♖h8 23.♖d5+ cxd5 B

A/B ♖a8 ↔ ♖h8
 Ceriani-Frolkin (♖♖♖)

PG 23.0 (12+15)

H068

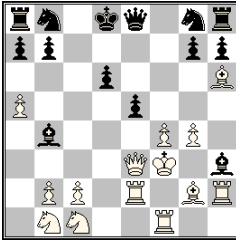


1.f4 ♗c6 2.f5 ♗d4 3.f6 ♗xe2 4.fxe7 f5 5.h4 ♗f7 6.e8 ♗e7 7.h5 ♗g5
 8.♖e6 ♖f6 9.♖b6 axb6 10.♖h4 ♖a3 11.♖a4 f4 12.b4 ♖b2 13.h6 ♗f6
 14.hxg7 ♖d8 15.g8 ♗+ ♗g6 16.♗d5 ♗e8 17.♗c6 dxc6 18.d4 ♗h3
 19.g4 A ♖g3 20.♗a3 ♖b1 21.♗b2 ♗c1 22.♗e2 ♗f1 23.♗h3 ♖g1 B

A/B ♖a3 → ♗g1 → ♗h3 → ♗f1 → ♗e2 → ♗c1 → ♖b2 → ♗b1 →
 ♖a3 (cyclic, eight pieces in consecutive moves)
 Combined with double Ceriani-Frolkin theme

PG 23.0 (13+14)

H069



PG 23.0 (14+14)

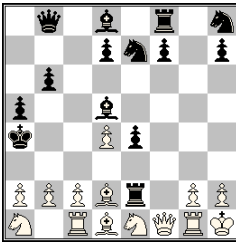
A 1.a4 f5 2.a5 f4 3. ♖a4 f3 4. ♜e4 fxe2 5.f4 e5 6.f5 ♙b4 7.f6 d6 8.f7+ ♚e7 9.f8 ♜h3 10.g4 c5 11. ♙g2 c4 12. ♜f1 c3 13. ♚f2 e1 ♜ 14. ♜f3 cxd2 15. ♜e2 d1 ♜ **B** 16. ♙h6 ♜e8 17. ♜c1 ♜d2+ 18. ♜e2 ♜d1 19. ♜e3 ♜e1+ **C** 20. ♚f3 ♜g3+ 21.hxg3 ♜d4 22. ♜h2 ♜f4+ 23.gxf4 ♚d8 **D**

A/D ♚e8 ↔ ♜d8

B/C ♜d1 ↔ ♜e1

Hidden theme implementation: black pawns promote to Rook on e1 and to Queen on d1, then these promoted pieces exchange their places before they are captured (Ceriani-Frolkin). Exchange of places by two Ceriani-Frolkin pieces has never been shown in a proofgame before. Impostor pawn on f4 (from h2!) captures both thematic Ceriani-Frolkin pieces. Capture of a Ceriani-Frolkin piece (**B** ♜) on a square visited by the pawn that later promoted to that piece

H070



PG 23.5 (14+14)

A 1.e4 a5 2.e5 ♜a6 3.e6 ♜xe6 4. ♙e2 b6 5. ♜f3 ♙b7 6.0-0 ♙d5 7. ♚h1 ♜c6 8. ♜g1 ♜b8 9. ♜f1 ♚d8 10. ♙d1 **B** ♜e2 11. ♜e1 **C** e5 12.f4 ♜e7 **D** 13.f5 ♜g6 14.f6 ♙e7 **E** 15.fxg7 ♜f8 16.g8 ♜h8 **F** 17. ♜g3 e4 18. ♜xc7 ♚xc7 19.d4 ♙d8 20. ♜d2 **G** ♜e7 21. ♜b3 ♚c6 **H** 22. ♙d2 ♚b5 23. ♜c1 ♚a4 24. ♜a1 **I**

A/B ♜d1 ↔ ♙f1

A/C ♚e1 → ♜g1 → ♜h1 → ♚e1 (cyclic)

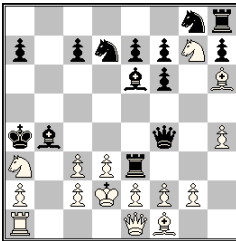
D/F ♜e7 → ♜f8 → ♜h8 → ♜e7 (cyclic)

E/H ♙e7 → ♚d8 → ♜c6 → ♙e7 (cyclic)

G/I ♜d2 → ♙c1 → ♜a1 → ♜d2 (cyclic)

Four times cyclic exchange, one direct exchange
Exchange all white aristocrat pieces, Ceriani-Frolkin (**W** ♜), castling, promotion, moving all aristocrat pieces

H071



PG 23.5 (15+14)

A 1. ♜f3 b5 2. ♜e5 b4 3. ♜xd7 b3 4. ♜c5 ♜d4 5. ♜e6 ♚d7 6.h4 ♚c6 7. ♜h3 ♚b5 8. ♜f3 ♚a4 9. ♜f6 gxf6 10.d3 ♙h6 11. ♜g7 ♙e6 12. ♜d2 **B** ♜d7 13. ♚d1 **C** ♜b8 14. ♜e1 **D** ♙d2 15. ♜a3 ♙b4 16. ♙h6 ♜c3 17.bxc3 b2 18. ♚d2 **E** b1 ♜ 19. ♜d1 **F** ♜c1+ 20. ♚e1 **G** ♜f4 21. ♜d2 **H** ♜b5 22. ♚d1 **I** ♜e5 23. ♜e1 **J** ♜e3 24. ♜d2 **K**

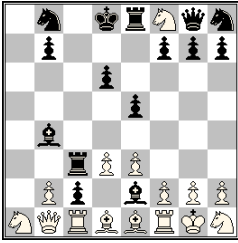
A/D/G/J ♜d1 ↔ ♚e1 (3 times)

B/E/H/K ♜d2 ↔ ♚e1 (3 times)

C/F/I ♜d2 ↔ ♚d1 (2 times)

Phoenix theme

H072



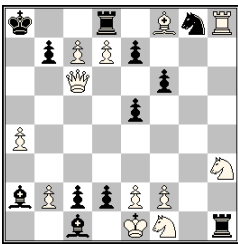
PG 24.0 (15+15)

A 1.e3 e5 2.♖e2 ♗b4 3.♘g3 d6 4.♙e2 ♙f5 5.0-0 ♙xc2 6.♘h1 **C**
 ♙d3 7.♖c2 a5 8.♙d1 ♙e2 **D** 9.d3 a4 10.♙d2 a3 11.♘xa3 c5 12.♖c1 c4
 13.♖b1 c3 14.♘c2 **E** ♖a3 15.♘a1 c2 16.♙e1 ♖c3 17.a4 ♘e7 18.a5
 ♘g6 19.a6 ♖e7 20.a7 ♘d8 21.a8 ♘e8 22.♘b6 ♖f8 23.♘d7 ♖g8
 24.♘f8 ♘h8 **F**

A/F ♘g1 → ♖h1 → ♙f1 → ♖d1 → ♘b1 → ♖a1 → ♙c1 → ♖e1 →
 ♘g1 (cyclic), ♘g8 → ♖h8 → ♖e8 → ♖d8 → ♘g8 (cyclic)
B/C ♖h1 → ♙f1 → ♘e2 → ♖h1 (cyclic)
C/D ♙e2 → ♖d1 → ♙c2 → ♙e2 (cyclic)
D/E ♖c2 ↔ ♘b1

An 8-cycle on the 1st rank + a 4-cycle on the 8th rank

H073



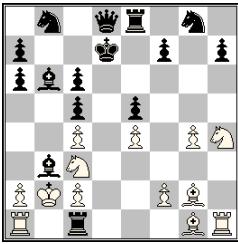
PG 25.0 (12+12)

A 1.d4 c5 2.d5 ♘c6 3.dxc6 d5 4.c4 d4 5.♖a4 ♖d5 6.cxd5 ♙e6 7.d6 0-0-0
 8.d7+ ♘b8 9.c7+ ♘a8 10.♖c6 c4 11.a4 c3 12.♖a3 c2 13.♖f3 d3 14.♖f6
 gxf6 15.♙e3 ♙h6 16.♙xa7 ♙c1 17.♙e3 h6 18.♙xh6 ♙a2 19.♙f8
 ♖xh2 20.♘d2 ♙xg2 21.♖h8 ♖h2 22.♙h3 ♖h1 23.♙e6 fxe6 24.♘f1
 e5 25.♘h3 d2# **B**

A/B ♙c1 ↔ ♙f8, ♖h1 ↔ ♖h8, ♖c2 → ♖d7 → ♖d2 → ♖c7 → ♖c2
 (cyclic, four pawns)

All black thematic pieces participate in mating the white king

H074

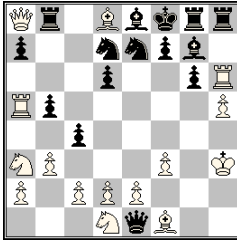


PG 25.0 (13+15)

A 1.e4 ♘c6 2.♖e2 ♖b8 3.♖a6 bxa6 4.♘f3 ♖b3 5.♘h4 ♖c3 6.b4 e5
 7.b5 ♙c5 8.b6 ♘ce7 9.b7 ♙b6 10.b8 ♘c5 11.♘c6 dxc6 12.dxc3 ♙e6
 13.♙f4 ♙b3 14.c4 ♘f6 15.♘c3 ♘d7 16.0-0-0 g5 17.♖d3 g4 18.♖h3 g3
 19.♘b2 gxh2 20.g4 ♘b8 21.♙g2 ♘d7 22.♖a1 h1 23.♙h2 ♖c1
 24.♙g1 ♖e8 25.♖h1 ♘g8 **B**

A/B ♘b8 ↔ ♘g8, ♖a1 ↔ ♖h1

H075



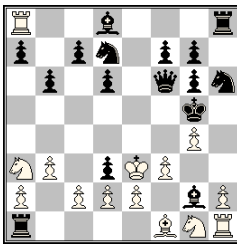
PG 25.0 (15+15)

1.b3 h5 2.♙a3 h4 3.♙xe7 h3 4.♘a3 h×g2 5.h4 d6 6.♘h3 g1 ♖7 h5 ♖g6
 8.♖g1 ♖gh6 9.♖g6 **A** ♙d7 **B** 10.♙g2 ♖c8 11.♙d8 ♘e7 12.♙f1 ♖g8
 13.♙g1 ♖hh8 14.♖h6 g6 15.♙h2 ♙g7 16.♖h1 ♙f8 17.♖g1 ♙e8 **C**
 18.♙f1 ♘d7 19.♖g5 ♖b8 20.♖a5 b5 21.♖a8 c5 22.f3 c4 23.♘f2 ♖c5
 24.♘d1 ♖f2+ 25.♙h3 ♖e1 **D**

B/D ♙d7 → ♙e8 → ♙f8 → Bg7 → ♖g6 → ♖h6 → ♖h8 → ♘g8 →
 ♙e7 → ♖d8 → ♙e1 → ♘h3 → ♖d1 → ♖a8 → ♘b8 → ♙d7 (cyclic,
 15-fold)

A/C ♙c8 → ♙e8 → ♙f8 → Bg7 → ♖g6 → ♖h6 → ♖h8 → ♘g8 →
 ♙e7 → ♖d8 → ♙c8 (cyclic, 10-fold)

H076



PG 25.5 (14+16)

A 1.f3 d5 2.♘f2 d4 3.♖e1 d3 4.♙e3 ♙h3 5.♖g3 ♘d7 6.♖g6 h×g6 7.g4
 ♙g2 8.b3 ♘h3 **B** 9.♙a3 ♖g3 **C** 10.♙d6 ♙h3 11.♘a3 ♖g2 **D** 12.♖b1
 ♖f2 13.♙g2 ♖f1 **E** 14.♖b2 ♖a1 15.♖b1 exd6 16.♖f1 **F** ♙e7 17.♖f2
 ♙f6 18.♙f1 ♙g5 19.♖g2 **G** ♖f6 20.♖g3 **H** ♙g2 21.♖h3 **I** ♙e7
 22.♖h8 **J** ♙h6 23.♖b8 b6 24.♖b7 ♖h8 25.♖b8 ♙d8 26.♖a8 **K**

A/J, D/G, C/H, B/I W♖a1 ↔ B♖h8 (current positions, 4 times)

B/D ♖h3 ↔ ♙g2

B/E ♙f1 → ♙g2 → ♖h3 → ♙f1 (cyclic)

B/F ♖a1 → ♙f1 → ♙g2 → ♖h3 → ♖a1 (cyclic)

B/G, D/I W♖a1 → B♙c8 → B♖h8 → W♖a1 (current positions, 2 times)

D/E ♙f1 ↔ ♖g2

D/F ♖a1 → ♙f1 → ♖g2 → ♖a1 (cyclic)

F/G ♙f1 ↔ ♙g2

F/I ♙f1 → ♙h3 → ♙g2 → ♖f1 (cyclic)

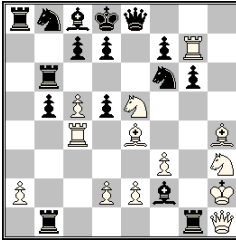
G/I ♖g2 ↔ ♙h3

J/K ♖h8 ↔ ♖a8

A/K ♖a1 → ♖a8 → ♖h8 → ♖a1 (cyclic)

After successive exchanges ♖a1/♖h8, ♖h8/♖a8, cyclic exchange
 ♖a1/♖h8/♖a8 is obtained. Also, during solution there are multiple
 simple and cyclic exchanges with the participation of ♖a1, ♖h8, ♙f1
 and ♙c8. Altogether there are 16 occurrences of theme with
 permutations of 2, 3 or 4 pieces

H077

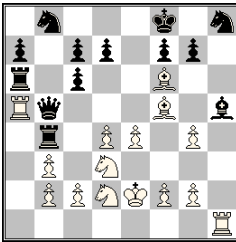


PG 26.0 (13+16)

A 1. ♖a3 h5 2. ♗c4 h4 3. ♗e5 h3 4.c4 hxg2 5.h4 ♖h6 6.h5 ♖b6 7.h6 a5 8.h7 a4 9. h8 ♗a3 10. ♖h7 axb2 11. ♗h3 b1 ♖ 12. ♗a3 g1 ♖ B 13. ♗d6 ♖g6 14. ♗g2 exd6 15. ♗f1 d5 16. ♗g1 ♗c5 17. ♗h2 ♖e7 18. ♖h1 ♖g1 19. ♖c1 ♖bb1 20. ♗e4 b5 21.f3 ♗f2 22.c5 ♖b6 C 23. ♖c4 g6 24. ♗f6 ♗d8 25. ♗h4 ♗f6 26. ♖g7 ♖e8 D

A/D ♖d8 ↔ ♗e8
 B/C ♖b6 → ♖b1 → ♖g1 → ♖b6 (cyclic)

H078



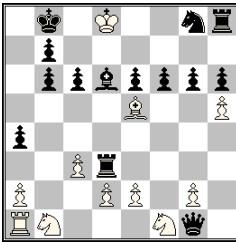
PG 26.5 (15+13)

1.d4 h5 2. ♗g5 h4 3. ♗xe7 h3 4. ♗f6 ♗d6 5. ♗d2 ♗g3 6.hxg3 h2 7. ♗h3 ♗e7 8. ♗f4 ♖h3 9.g4 ♖b3 10.e3 ♗g6 11. ♖f3 ♗h8 12. ♖c6 bxc6 13.axb3 ♗a6 14. ♖a5 ♗d3 15. ♖h5 ♗g6 16. ♗d3 ♗a6 17. ♗e2 ♖b8 18. ♖a1 h1 ♖ 19. ♖aa5 ♖a1 20. ♖h1 B ♖b4 21. ♖ah5 ♖b8 22. ♗f5 ♖b5+ 23. ♗d3 ♗b8 24.e4 ♖a6 25. ♖a1 ♗f8 26. ♖hh1 ♗h5 27. ♖a5 C

A/B/C ♖a5 ↔ ♖h1 (twice)

Lois theme for same color rooks

H079



PG 27.5 (11+14)

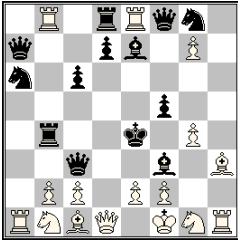
1.b4 a5 2.b5 a4 3.b6 cxb6 4.f4 ♖c7 5.f5 ♖f4 6.f6 gxf6 7. ♗b2 ♗h6 8. ♗e5 ♗g5 9.c3 h6 10. ♖c2 ♗h4+ 11. ♗d1 ♗e1 12.h4 ♖xf1 A 13. ♗f3 ♖g1 14. ♗h2 ♗f2+ 15. ♗f1 B ♗c5 16.h5 ♗d6 17. ♖h4 ♗c7 18. ♖c4 ♗d8 19. ♖xc8 ♗c6 20. ♖xc6 ♗c7 21. ♖g6 0-0-0 22. ♗c2 ♗b8 23. ♗d3 C dxc6+ 24. ♗e4 ♖d3 25. ♗f5 fxg6+ 26. ♗e6 ♗d6 27. ♗d7 e6 28. ♗d8 D

A/B ♖f1 ↔ ♗g1

C/D ♗d3 ↔ ♖d8

B ♗d6 is used as a shield 5 times

H080



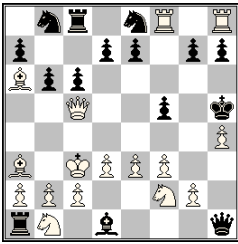
A 1.h4 f5 2.h5 ♖f7 3.h6 ♗f6 4.hxg7 h5 5.♙h3 h4 6.♙b3 h3 7.a4 h2 8.a5 h1 9.♙a4 ♗h3 10.♙h4 ♗c3 11.♙h1 ♙h4 12.a6 ♙b4 13.axb7 a5 14.g4 a4 15.♙h3 a3 16.♙f1 a2 17.d4 a1 ♗ 18.d5 ♗a7 19.d6 ♙a6 20.b8 ♗ ♙b7 21.dxe7 ♙f3 22.e8♗ B c6 23.♙e5 ♙e7 24.♙eb5 ♗f8 25.♙e8 ♙d8 26.♙b8 ♙e5 27.♙a3 ♙e4 28.♙a1 C

A/C ♙a1 ↔ ♙h1
 B/C ♙b8 ↔ ♙e8 (promoted)

Capture-free exchange

PG 27.5 (16+13)

H081

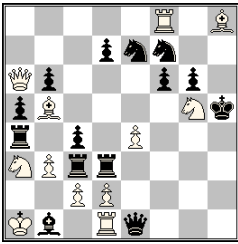


A 1.e3 b6 2.♗h5 ♙b7 3.♗c5 f5 4.h4 ♙f7 5.♙h3 B ♙g6 6.♙g3+ C ♙h5 7.♙g6 D ♙f3 8.♙f6 E ♙c6 9.♙xf8 F ♙f6 10.♙e8! G ♙f8 H 11.♙a6 ♙f7 12.♙h8 ♙e8 13.d3 ♙f6 I 14.♙d2 ♙g6 J 15.♙b4 ♙g3 K 16.♙d2 ♙h3 L 17.♙c3 ♙h1 M 18.♙h3 ♙e1! 19.♙d2 ♙e2 20.♙h1 ♙e1 21.♙a3 ♙a1 N 22.♙b1 ♙d1 23.f3 ♙c8 24.♙f2 ♙b8 25.♙h3 O c6 26.♙g3 P ♙c7 27.♙g6 Q ♙h2 28.♙f6 R ♙h1 29.♙ff8 S

Multiple exchanges (PW) between W♙ and B♙ from h8.
 E/I, D/J, C/K, B/L, A/M ♙h1↔♙h8 (PW of current places, 5-fold)
 M/N, L/O, K/P, J/Q, I/R, H/S ♙a1↔♙h8 (PW of current places, 6-fold)
 A/N, B/O, C/P, D/Q, E/R, F/S ♙h1→♙h8→♙a1→♙h1 (cyclic PW of current places, 6-fold, from 2xBelfort B♙a1/W♙h8 & sibling W♙h1)
 Also, G/I ♙f6→♙e8→♙h8→♙f6 (cyclic)
 White knight & black knight switchbacks.

PG 28.5 (16+15)

H082



1.f4 h5 2.f5 h4 3.f6 h3 4.fxe7 hxg2 5.exf8 ♙h3 6.♙c5 ♗c3 7.♙b6 axb6 8.h4 ♙a4 9.♙h3 g1 10.h5 ♗gg3 11.h6 ♙h4 12.h7 f6 13.h8♗ ♙f7 14.♙h5 ♙g6 15.♙a5 bxa5 16.e4 b6 17.♗e2 ♙b7 18.♗a6 ♙d5 19.♙b5 ♙xa2 20.b3 c5 21.♙a3 c4 22.♙f8 ♙c6 23.♙a3 ♙ce7 24.0-0-0 ♗gd3 25.♙g5 ♗e1 26.♙h8 A ♙h6 27.♙b2 ♙h5 28.♙a1 g6 29.♙g7 ♙b1 30.♙f8 ♙f7 31.♙h8 B

A/B ♙h8 ↔ ♙f8

First presentation of exchange of places by two anti-Pronkin pieces

PG 30.5 (12+14)