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Article

Annotation of pgn file TS.pgn

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Annotation of KP-endgame test sets' pgn

Guy Haworth, 2015-04-10

{see Haworth, G. McC. (2015), 'Chess Endgame News', ICGA J., Vol. 38, No. 1, pp. 41-46}

For drawn positions, it is assumed that the strategies employed are $SV^{+}C^{+}Z^{+}/SV^{+}C^{+}Z^{+}$, i.e., that both sides seek to hasten the demonstration of the draw. Otherwise, SMFCZ-minimaxing lines are followed. Notation:

- ′′′′ ≡ absolutely unique value-preserving move
- ′′′ ≡ essentially-unique value-preserving move
- ′′ ≡ uniquely optimal move
- ′ ≡ optimal move
- ° ≡ only available move

{The KP-endgame test set TS1: 16 'Fine' positions}

[Event "TS1.01, 5m"]
[Date "2015.04.29"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "6k1/7p/5P1K/8/8/8/7P/8 w - - 0 1"]
[PlyCount "35"]

{**CRAFTY:**} 1. Kg5′′′′ Kf7 {-2m}
({**SMFCZ-minimaxing line:**} 1. ... Kf8′′ 2. Kf5′′ Kf7′′ 3. Ke5′′′′ h5′′ 4. h4′′ Kf8′′ 5. Kf5′′ Kf7′′ 6. Kg5′′ Kf8′′ 7. Kxh5′′ {**4m, KPPK**} Kf7′′ 8. Kg5′′′′ Kf8′ 9. h5′′ Kf7′′ 10. h6′′ Kg8′′ 11. Kf5′′ Kf8′′ 12. h7′′ Kf7′′ 13. Ke5′′ Ke8′′ 14. f7+′′ Ke7′ 15. h8=Q′′ Kd7′′ 16. f8=Q′′ Kc6′ 17. Qb8′′ Kc5′ 18. Qhc8#′′)
R2. Kf5 h6 3. Ke5 {+2m} h5 4. h4 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kf8 5. Kf5 Kf7 6. Kg5 Kf8 7. Kxh5 {**4m, KPPK**} Kf7 8. Kg5 Kf8 9. h5 Kf7 10. h6 Kg8 11. Kf5 Kf8 12. h7 Kf7 13. Ke5 Ke8 14. f7+ Ke7 15. h8=Q {4m, KQPK} Kd7 16. f8=Q {**4m, KQQK**} Kc6 17. Qb8 Kc5 18. Qhc8# **1-0**

[Event "TS1.02, 5m"]
[Date "2015.04.30"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/2k5/p1P5/P1K5/8/8/8/8 w - - 0 1"]
[PlyCount "31"]

{**CRAFTY:**} 1. Kd5′′′′ Kc8′′ 2. Kd4′ Kd8′ 3. Kc4′′ Kc7 {-1m}
({**SMFCZ-minimaxing line:**} 3. ... Kc8′′ 4. Kd5′′ Kc7′′ 5. Kc5′′′′ {position 1w but with btm} Kc8′′ 6. Kb6′′ Kb8′′ 7. Kxa6′′ {**4m, KPPK**} Kc7′′ 8. Kb5′′′′ Kc8′′ 9. a6′′ Kb8′′ 10. Kc5′′ Kc8′′ 11. a7′′ Kc7′′ 12. Kd5′′ Kd8′′ 13. c7+′′ Kd7′ 14. a8=Q′′ Ke7′′ 15. c8=Q′′ Kf6′ 16. Qg8′′ Kf5′ 17. Qaf8#′′)
4. Kc5 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kc8 5. Kb6 Kb8 6. Kxa6 Kc7 7. Kb5 Kc8 8. a6 Kb8 9. Kc5 Kc8 10. a7 Kc7 11. Kd5 Kd8 12. c7+ Kd7 13. a8=Q Ke7 14. c8=Q Kf6 15. Qg8 Kf5 16. Qaf8# **1-0**

[Event "TS1.03, 5m"]
[Date "2015.04.30"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "4k3/4Pp2/5P2/4K3/8/8/8/8 w - - 0 1"]
[PlyCount "29"]

{**CRAFTY:**} 1. Kf5′ Kd7° 2. Kf4′ Ke8′′ 3. Ke5 {+2m}
({**SMFCZ-minimaxing line:**} 3. Kg5′′ Kd7° 4. Kh6′′ Ke8′′ 5. Kg7′′ Kd7° 6. Kxf7′′ {**4m, KPPK**} Kc6′ 7. e8=Q+′′ Kd5′ 8. Qe3′ Kc4′ 9. Ke6′ Kb5′′ 10. f7′′ Kc4′ 11. f8=Q′′ Kb5° 12. Qfc5+′′ Ka4′ 13. Qea3#′′)
3. ... Kd7 4. Kf5 {*dtm* = -11m. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Ke8 5. Kg5 Kd7 6. Kh6 Ke8 7. Kg7 Kd7 8. Kxf7 {**4m, KPPK**} Kc6 9. e8=Q+ Kd5 10. Qe3 Kc4 11. Ke6 Kb5 12. f7 Kc4 13. f8=Q Kb5 14. Qb3+ Kc6 15. Qc8# **1-0**

[Event "TS1.04, 5m"]
[Date "2015.04.30"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p2/8/4K1P1/5Pk1/8/8/8 w - - 0 1"]
[PlyCount "47"]

{**CRAFTY:**} 1. Ke4′′′′ Kh4′′ 2. Kf3 {+3m}
({**SMFCZ-minimaxing line:**} 2. Kd5′′ Kh5′′ 3. Kd6′′ Kg4′′ 4. Ke5′′′′ Kh4′ 5. Kf6′′ Kh5′ 6. Kxf7′′ {**4m, KPPK**} Kg4′ 7. g6′′ Kf3′ 8. g7′′ Ke3′ 9. g8=Q′′ Kd3′ 10. Qg1′ Kc4′ 11. Ke6′ Kd3′ 12. Kd5′′ Kc3′ 13. Qd1′ Kb4′′ 14. Qc2′ Ka5′ 15. Qb1′ Ka4′ 16. Kc4′′ Ka5′ 17. Qb5#′′)
2. ... Kh5 3. Kg3 Kg6 {and now CRAFTY repeats with Kf3 when the only winning move is} 4. Kg4 {SMFCZ-optimal continuation ...} f6 5. f5+ Kf7 6. g6+ Kg7 7. Kf3 Kf8 8. Ke4 Ke8 9. g7 Kf7 10. Kd5 Kg8 11. Ke6 Kxg7 12. Ke7 Kg8 13. Kxf6 Kh7 14. Ke6 Kh6 15. f6 Kg5 16. f7 Kf4 17. f8=Q+ Ke4 18. Kd6 Kd4 19. Qf3 Kc4 20. Qd1 Kb4 21. Qd3 Ka5 22. Kc5 Ka4 23. Qh3 Ka5 24. Qa3# **1-0**

[Event "TS1.05, 6m"]
[Date "2015.05.02"]
[White "KPP"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/2pp3k/8/1P1P3K/8/8/8 w - - 0 1"]
[PlyCount "23"]

{**CRAFTY:**} 1. d5′′ c5 {-4m}
({**SMFCZ-minimaxing line:**} 1. ... cxd5′′ {**5m, KPKPP**} 2. Kg4′ Kg6′ 3. b5′′′′ d4′′ 4. Kf3′ Kf5′ 5. b6′′′′ d3′′ 6. Ke3′′ Ke6′′ 7. b7′′′′ d2′′ 8. Kxd2′′ Ke5′′ 9. b8=Q′′ Kd5′′ 10. Qc7′ Ke5′ 11. Kd3′′ Kd5′′ 12. Qe7′′ Kc5′′ 13. Qb7′′ d5° 14. Qd7′′ d4′′ 15. Qe6′′ Kb4′ 16. Qb6+′′ Ka3′′ 17. Kxd4′′ Ka2′ 18. Kc3′′ Ka3′ 19. Qa6#′)
2. bxc5 dxc5 {**4m, KPKP**} 3. d6 c4 {-2m} 4. d7 c3 {-1m} 5. d8=Q {*dtm* = -7m. This ends CRAFTY's line.} {SMFCZ-minimaxing continuation ...} Kg6 6. Kg4 c2 7. Qg5+ Kf7 8. Kf5 c1=Q 9. Qxc1 {3m, KQK} Ke7 10. Qc7+ Ke8 11. Kf6 Kf8 12. Qb8# **1-0**

[Event "TS1.06, 6m"]
[Date "2015.05.02"]
[White "KPP"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/3pkp2/8/8/3PK3/5P2/8 w - - 0 1"]
[PlyCount "47"]

{**CRAFTY:**} 1. Ke4′′′ d5+′ 2. Kf4′′′ f5′′ 3. d4′ Kf6′′ 4. f3′′′ Ke6′′ 5. Kg5′′′ f4′′ 6. Kxf4′′ {**5m, KPPKP**. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kf6′′ 7. Kg4′′ Kg6′′ 8. f4′′ Kf6′′ 9. f5′′ Ke7′ 10. Kg5′′ Kf7′′ 11. f6′′ Kf8′′ 12. Kf5′′ Kf7′′ 13. Ke5′′ Kf8′′ 14. Kxd5′′ {**4m, KPPK**} Kf7′′ 15. Ke5′′ Kf8′′ 16. Ke6′′ Ke8′ 17. f7+′ Kf8′′ 18. d5′′ Kg7° 19. d6′′ Kf8′′ 20. d7′′ Kg7° 21. d8=Q′ Kg6′ 22. f8=Q′ Kh5′′ 23. Qg8′ Kh6° 24. Qdg5#′ **1-0**

[Event "TS1.07, 7m"]
[Date "2015.05.02"]
[White "KP(3)"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/2ppk3/8/2PPK3/2P5/8/8 w - - 0 1"]
[PlyCount "31"]

{**CRAFTY:**} 1. d5+′′′ Kd7 {-4m}
({**SMFCZ-minimaxing line:**} 1. ... cxd5+′′ 2. cxd5+′′′ {**5m, KPPKP**} Kf6′′ 3. Kd4′′ Kf5′′ 4. c4′′ Kf6′′ 5. c5′′ Ke7′′ 6. c6′′′ Ke8′′ 7. c7′′ Kd7′′ 8. Ke4′′ Kxc7′′ {**4m, KPKP**} 9. Kf5′′′ Kd7′ 10. Kf6′′ Kc8′ 11. Ke6′′ Kc7′′ 12. Ke7′′ Kc8′′ 13. Kxd6′′ {**3m, KPK**} Kd8′′ 14. Ke6′′ Kc7′ 15. d6+′′ Kc8′′ 16. Ke7 Kb7 17. d7 Kb6 18. d8=Q+ Kc5 19. Qd2 Kc4 20. Kd6 Kb5 21. Qc3 Ka4 22. Qb2 Ka5 23. Kc5 Ka4 24. Qa2#)
2. dxc6+ {+2m. **6m, KP(3)KP**} Kd8 {-8m} 3. Kd5 Kc7 4. c5 Kc8 {-1m} 5. cxd6 {**5m, KP(3)K**} Kd8 6. c7+ {+1m} Kd7 7. Ke5 Kc8 8. c4 {+2m} Kd7 {*dtm* = -8m. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 9. Kd5 Kc8 10. Ke6 Kb7 11. Kd7 Kb6 12. c8=Q Ka7 13. Ke7 Kb6 14. Qc7+ Ka6 15. Qb8 Ka5 16. Qb5# **1-0**

[Event "TS1.08, 10m"]
[Date "2015.04.30"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/ppp5/8/PPP3kp/8/6KP/8/8 w - - 0 1"]
[PlyCount "39"]

{**CRAFTY:**} 1. b6′′ h4+′′ 2. Kf3′ axb6′ {**9m, KP(3)KP(4)**} 3. c6′′ bxc6′′ {**8m, KPPKP(4)**} 4. a6′′ Kf6′ 5. a7′′ Ke6′ 6. a8=Q′′ Kd7 {-2f}
({**SMFCZ-minimaxing line:**} 6. ... Kd5′′ 7. Qd8+′′ Ke5′′ 8. Qxc7+′′ {**7m, KQPKP(3)**} Kd5′′ 9. Qd7+′′ Ke5′′ 10. Qxc6′′ {**6m, KQPKPP**} Kf5′′ 11. Qxb6′′ {**5m, KQPKP**} Ke5′′ 12. Qd8′′ Ke6′′ 13. Kf4′ Kf7° 14. Kf5′′ Kg7° 15. Qe7+′′ Kg8′ 16. Kf6′ Kh8° 17. Qg7#′′)
7. Qh8 c5 8. Qxh4 {**7m, KQPKP(3)**} b5 9. Qh7+ Kc6 10. h4 c4 11. h5 c3 12. h6 Kb6 13. Qg6+ c6 14. h7 c2 15. Qg1+ c5 16. h8=Q c1=Q 17. Qd8+ Kb7 18. Qg7+ Ka6 19. Qa8+ Kb6 20. Qgb7# **1-0**

[Event "TS1.09, 8m"]
[Date "2015.05.03"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1k3ppp/8/3K4/7P/5PP1/8/8 w - - 0 1"]
[PlyCount "41"]

{**CRAFTY:**} 1. Kd6″ f5″ 2. Ke7 {+1f}
({**SMFCZ-minimaxing line:**} 2. g4″ fxg4″ 3. fxg4‴ {**6m, KPPKPP**} Kb6″ 4. g5″ g6″ 5. Ke6′ Kc5″ 6. Kf6′ Kd4″ 7. Kg7″ Ke4′ 8. Kxh7″ {**5m, KPPKP**} Kf5″ 9. Kh6′ Ke5′ 10. Kxg6″ {**4m, KPPK**} Ke6′ 11. h5″ Ke7′ 12. h6″ Kf8′ 13. h7″ Ke7″ 14. h8=Q″ Kd6″ 15. Kf6′ Kd5′ 16. g6″ Kd4′ 17. g7″ Ke4′ 18. g8=Q″ Kd3′ 19. Qb3+′ Kd4′ 20. Ke6+′ Kc5′ 21. Qhc3#″)
2. ... Kc6 3. Kf7 h5 4. Kxg7 {**7m, KP(3)KPP**} Kd5 5. Kf6 Kd6 6. Kxf5 {**6m, KP(3)KP**} Kd7 7. Kg6 Ke8 8. g4 hxg4 {**5m, KPPKP**, *dtm* = 13m.This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 9. fxg4 {**4m, KPPK**} Kf8 10. h5 Ke7 11. h6 Kd6 12. h7 Kc5 13. h8=Q Kb4 14. Kf6 Kc3 15. Ke5 Kd3 16. Qc8 Ke3 17. Qc3+ Ke2 18. Kf4 Kf2 19. Qb2+ Ke1 20. Ke3 Kd1 21. Qb1# **1-0**

[Event "TS1.10, 8m"]
[Date "2015.04.30"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/2p5/3k4/1p1p1K2/8/1P1P4/2P5/8 w - - 0 1"]
[PlyCount "53"]

{**CRAFTY:**} 1. b4‴ Ke7 {-1f}
({**SMFCZ-minimaxing line:**} 1. ... d4″ 2. Ke4″ Ke6″ 3. Kxd4 {**7m, KP(3)KPP**} Kd6″ 4. c3″ c6″ 5. Ke4″ Ke6′ 6. d4″ Kd6″ 7. d5‴ Kd7″ 8. dxc6+″ Kxc6″ {**5m, KPPKP**} 9. Ke5″ Kc7′ 10. Kd5″ Kb6″ 11. Kd6″ Kb7′ 12. Kc5″ Ka6″ 13. Kc6″ Ka7° 14. Kxb5″ {**4m, KPPK**} Kb7″ 15. Kc5″ Kc7′ 16. b5″ Kd8″ 17. b6″ Kd7″ 18. c4″ Kc8″ 19. Kc6″ Kd8″ 20. b7″ Ke7′ 21. b8=Q″ Kf6′ 22. Qf4+″ Kg6′ 23. Kd5′ Kg7′ 24. Qg5+′ Kf7″ 25. Kd6″ Kf8″ 26. Ke6″ Ke8° 27. Qe7#′)
2. Ke5 c6 3. d4 Kd7 4. Kf6 Kd6 5. c3 Kd7 6. Kf7 Kd6 7. Ke8 Kc7 8. Ke7 Kc8 9. Kd6 Kb7 10. Kd7 Kb6 11. Kc8 Ka6 12. Kc7 Ka7 13. Kxc6 {**7m, KP(3)KPP**} Ka6 14. Kxd5 {**6m, KP(3)KP**} Kb6 15. Ke6 Kc7 16. d5 Kd8 17. d6 Ke8 18. c4 Kd8 19. cxb5 {5m, KP(3)K. *dtm* = -8m. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kc8 20. b6 Kb7 21. d7 Kc6 22. d8=Q Kb5 23. b7 Kc4 24. b8=Q Kc3 25. Qd1 Kb2 26. Qg3 Ka2 27. Qgb3# 1-0

[Event "TS1.11, 9m"]
[Date "2015.04.30"]
[White "KP(4)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/k7/3p4/p2P1p2/P2P1P2/8/8/K7 w - - 0 1"]
[PlyCount "63"]

{**CRAFTY:**} 1. Kb1′′′ Kb7′ 2. Kc1′′′ Kc7′′ 3. Kd1′′′ Kd7′ 4. Kc2′′′ Kc8′′ 5. Kd2′′ Kd7′ 6. Kc3′′ Kc7′′ 7. Kd3′′ Kb7′ 8. Ke2′ Kc7′ 9. Kf2′ Kd7′ 10. Kg3′′′ Ke7′′ 11. Kh4′′′ Kf6′′ 12. Kh5′′′ Kf7′′ 13. Kg5′′ Kg7′′ 14. Kxf5′′ {**8m, KP(4)KP(2)**} Kf7′′ 15. Kg5 {+2f}
({SMFCZ-minimaxing line:} 15. Ke4′′ Kg7′ 16. Kd3′′ Kf7′ 17. Kc4′′ Kf8′ 18. f5′′ Ke7′ 19. Kb5′′ Kf6′ 20. Kxa5′′ {**7m, KP(4)KP**, *dtm* = -13m} Ke7′ 21. Kb5′ Kd7′ 22. a5′′ Ke7′ (22... Kc7 {'more natural'} 23. f6′′ Kd7′ 24. f7′′ Ke7′ 25. f8=Q+′′ Kd7′′ {DTZ-optimal but unnatural} 26. Qf7+′′ Kc8′ 27. Kc6′′ Kb8′ 28. Qb7#′′) 23. a6′′ Kf6′ 24. a7′′ Kg5′′ 25. a8=Q′′ Kxf5′′ {**6m, KQPPKP**} 26. Qd8′ Kf4′ 27. Qf6+′ Ke4′ 28. Kc4′′ Ke3° 29. Qf5′ Ke2′′ 30. Qf4′′ Kd1′′ 31. Qf2′ Kc1° 32. Kc3′′ Kb1′ 33. Qb2#′′)
15. ... Kg7 16. f5 Kf7 17. f6 Kf8 18. Kg4 Kg8 19. Kf4 Kf8 20. Kg5 Kf7 21. Kf5 Kf8 22. Ke6 Ke8 23. Kxd6 {**7m, KP(4)KP**} Kf7 24. Ke5 Kg6 25. d6 Kh5 26. f7 Kh4 27. f8=Q Kg4 28. d7 Kg3 29. d8=Q Kg4 30. Qf5+ Kg3 31. Qg8+ Kh2 32. Qfh7# **1-0**

[Event "TS1.12, 11m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/p6p/1p3kp1/1P6/P4PKP/5P2/8 w - - 0 1"]
[PlyCount "67"]

{**CRAFTY:**} 1. f4 gxf4+ {**10m, KP(4)KP(4)**} 2. Kh4′′′ Ke4 {-1f}
({**SMFCZ-minimaxing line**:} 2. ... f3′′ 3. Kg3′ Ke4′′ 4. Kg4′′ Ke5′′ 5. Kxf3′′ {**9m, KP(4)KP(3)**} Kf5′′ 6. h4′′ h5′′ 7. Ke3′′ Ke5′ 8. f4+′ Kf5′′ 9. Kf3′′ Kf6′′ 10. Ke4′′ Ke6′′ 11. f5+′′ Kf6′′ 12. Kf4′′′ Kf7′′ 13. Kg5′ Kg7′′ 14. Kxh5′′ {**8m, KP(4)KP(2)**} Kf6′′ 15. Kg4′′ Kf7′′ 16. h5′′ Kg7′′ 17. Kg5′ Kf7′ 18. f6′ Kf8′ 19. h6′′ Kg8′′ 20. f7+′′ {unnatural} (20. Kg6 Kf8 21. h7 Ke8 22. h8=Q+ Kd7) 20. ... Kf8′′ {also unnatural} 21. h7′′ Kg7′ 22. h8=Q+′ Kxf7′′ {**7m, KQPPKPP**} 23. Qe5′ a5′′ 24. Qd6′ Kg7′′ 25. Qg6+′ Kf8′ 26. Kf6′′ a4° 27. Qf7#′′)
3. Kg4 f3 4. Kg3 h5 5. h4 Kd4 6. Kxf3 {**9m, KP(4)KP(3)**} Kd3 7. Kf4 Ke2 8. Kg3 Kd3 9. Kf3 Kd4 10. Kf4 Kd5 11. Ke3 Ke5 12. f4+ Kd5 13. Kd3 Kd6 14. Kd4 Kc6 15. f5 a5 16. bxa5 {**8m, KP(4)KPP**} Kd6 17. Ke4 Kc5 18. f6 Kd6 19. Kf5 b4 20. f7 Ke7 21. axb4 Kxf7 {**6m, KP(3)KP**} 22. Kg5 Ke6 23. Kxh5 {**5m, KP(3)K**. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kd6 24. Kg4 Kc6 25. h5 Kb5 26. h6 Ka4 27. h7 Ka3 28. h8=Q Ka2 29. Qc3 Kb1 30. Kf3 Ka2 31. a6 Kb1 32. a7 Ka2 33. a8=Q+ Kb1 34. Qaa1# **1-0**

[Event "TS1.13, 14m"]
[Date "2015.05.09"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/1ppk4/p4pp1/P1PP2p1/2P1K1P1/7P/8 b - - 0 1"]
[PlyCount "43"]

{**CRAFTY:**} 1. ... Kc7 2. d5 cxd5 3. cxd5 {**12m, KP(5)KP(5)**} b5 4. axb5 {**11m, KP(5)KP(4)**} a4 5. Kd2 f4 6. c4 a3 7. Kc2 f3 8. b6+ Kxb6 {**10m, KP(4)KP(4)**} 9. d6 f2 10. d7 Kc7 11. Kb3 f1=Q 12. Kxa3 Qxc4 {**8m, KP(3)KQPP**} 13. d8=Q+ Kxd8 {**7m, KPPKQPP**, *dtm* = -7m.} 14. Kb2 Qe2+ {+2m}
({**SMFCZ-minimaxing line:**} 14... Kd7′ 15. Kb1′′ Qe2′ 16. Kc1′ Kc6′ 17. Kb1′′ Kc5′ 18. Kc1′ Kc4′ 19. Kb1′′ Kc3′ 20. Ka1′ Qb2#′′)
15. Kb3 Qxh2 {**6m, KPKQPP**} 16. Kb4 Qxg3 {**5m, KKQPP**} 17. Kc4 Qf4+ 18. Kd5 g3 19. Ke6 g2 20. Kd5 g1=Q {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 21. Kc6 Qc4+ 22. Kb7 Qc8# **0-1**

[Event "TS1.14, 12m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp5p/8/PP2k3/2P2pp1/3K4/6PP/8 w - - 0 1"]
[PlyCount "57"]

{**CRAFTY:**} 1. c5 Ke6 2. c6 Kd6 3. cxb7 {**11m, KP(5)KP(4)**} Kc7 4. a6 f3 5. gxf3 gxf3 {**9m, KP(4)KP(3)**} 6. Ke3 Kb8 7. Kxf3 {**8m, KP(4)KP(2)**} Kc7 {-2f}
({**SMFCZ-minimaxing line:**} 7. ... h6′′ 8. Kg4′ h5+′′ 9. Kxh5′′ {**7m, KP(4)KP**, *dtm* = -10m} Kc7° 10. h4′ Kb8′′ 11. Kg4′ Kc7° 12. h5′′ Kb8′′ 13. h6′′ Kc7° 14. h7′′ Kb6′ 15. h8=Q′ Kc5′′ 16. b8=Q′′ ({FINALGEN cannot explore an endgame with two White Queens and so does not play b8=Q} 16. Qc3+ Kxb5 17. Kf5 Kxa6 18. Ke6 Kb5 19. Kd5 Kb6 20. Qc6+ Ka5 21. Kc4 a6 22. Qc5+ Ka4 23. Qb4#) 16... Kd5′ 17. Qb2′ Kc5′ 18. Qc7+′ Kd5° 19. Qbe5#′) 8. Kf4 Kb8 9. Kg5 Kc7 10. Kh6 Kb8 11. Kxh7 {**7m, KP(4)KP**, *dtm* = -10m.} Kc7 12. Kh6 {+1m} Kb8 13. Kh5 {+1m} Kc7 14. Kh4 {+1m} Kb8 15. Kg4 Kc7 16. b8=Q+ {+5m} Kxb8 {**6m, KP(3)KP**, *dtm* = 13m. This ends CRAFTY's line. SMFCZ-minimaxing contribution ...} 17. h4 Kc7 18. h5 Kc8 19. h6 Kc7 20. h7 Kb6 21. h8=Q Kxb5 {**5m, KQPKP**} 22. Kf3 Kb4 23. Ke3 Kc4 24. Qe5 Kb3 25. Kd2 Kb4 26. Qd5 Ka3 27. Qb5 Ka2 28. Kc2 Ka3 29. Qb3# **1-0**

[Event "TS1.15, 14m"]
[Date "2015.05.09"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/7p/2k1Pp2/pp1p2p1/3P2P1/4P3/P3K2P/8 w - - 0 1"]
[PlyCount "57"]

{**CRAFTY:**} 1. e4 dxe4 {**13m, KP(5)KP(6)**} 2. Ke3 Kd6 3. d5 b4 4. Kxe4 {**12m, KP(5)KP(5)**} a4 5. Kd4 Ke7 6. Kc4 b3 7. axb3 {**11m, KP(5)KP(4)**} a3 8. Kc3 f5 9. gxf5 {**10m, KP(5)KP(3)**} g4 10. b4 h5 11. b5 h4 12. b6 a2 13. Kb2 g3 14. d6+ Kxd6 {**9m, KP(4)KP(3)**} 15. b7′′ Kc7 {-1f}
({**SMFCZ-minimaxing line:**} 15. ... a1=Q+ 16. Kxa1′′′ {**8m, KP(4)KPP**} Kc7′ 17. b8=Q+′ {**8m, KQP(3)KPP}** Kc6′′ ({though obviously more 'chessic' is } 17. ... Kxb8 {**7m, KQPPKPP}** 18. e7′′ Kc7′ 19. e8=Q′′ Kd6′ 20. Qe4′ gxh2 21. f6 Kd7′ 22. f7 h1=Q+ 23. Qxh1′′′ Ke7′′ 24. Qb7+′′ Kf8′′ 25. Qd7′′ Kg7′′ 26. Qe7′ Kg6′ 27. f8=Q′′ {**7m, KQQPKPP**} Kh5′′ 28. Qe5+′ Kg6′ 29. Qef5#′) 18. hxg3 {**7m, KQP(3)KP**} Kd5′′ 19. e7′′ Ke4′′ 20. e8=Q+′′ Kf3′′ 21. Qe1′ Kg2′ 22. gxh4′′ Kf3′ 23. Qbg3#′′)
16. e7 g2 17. b8=Q+ Kxb8 {**8m, KP(3)KP(3)**} 18. e8=Q+ Kc7 19. Qe7+ Kc6 20. Qe4+ Kd6 21. Qxg2 {**7m, KQPPKPP**. 7m-check} a1=Q+ 22. Kxa1 {**6m, KQPPKP**} Ke5 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 23. Qg5 Kd6 24. f6 Ke6 25. h3 Kd6 26. f7 Kc6 27. f8=Q Kb6 28. Qa8 Kc7 29. Qgd8# **1-0**

[Event "TS1.16, 12m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/6p1/3k1p2/2p2Pp1/2P1p1P1/1P4P1/4K3/8 w - - 0 1"]
[PlyCount "47"]

{**CRAFTY:**} 1. Kf2 Ke5 2. Ke3 Kd6 3. Kxe4 {**11m, KP(5)KP(4)**} Kc6 4. Kd3 Kb6 5. Kc3 Ka5 6. b4+ cxb4+ {**10m, KP(4)KP(4)**} 7. Kb3 Kb6 8. Kxb4 {**9m, KP(4)KP(3)**} Kc6′′ 9. c5′′ Kd5 {-4f}
({**SMFCZ-minimaxing line:**} 9. ... Kc7′′ 10. Kb5′′ Kb7′′ 11. c6+′′ Kc7′′ 12. Kc5′′′ Kc8′′ 13. Kb6′ Kb8′′ 14. c7+′′ Kc8′′ 15. Kc6′′′ g6° 16. fxg6′′ f5° 17. g7′′ f4′′ 18. g8=(Q/R)#′′)
10. Kb5 Ke4 11. c6 Kf3 12. Kc4 Kxg4 {**8m, KP(3)KP(3)**} 13. Kd4 Kxg3 {**7m, KPPKP(3)**} 14. Ke4 g4 15. c7 g6 16. fxg6 {**6m, KPPKPP**} f5+ 17. Kxf5 {**5m, KPPKP**, *dtm* = -7m. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kf2 18. Kxg4 {**4m, KPPK**} Ke3 19. c8=Q Kd4 20. g7 Kd5 21. g8=Q+ Kd4 22. Kf3 Ke5 23. Ke3 Kd6 24. Qge6# **1-0**

{The KP-endgame test set TS2}

[Event "TS2.01, 8m"]
[Date "2015.05.09"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p4kP/5pP1/3p4/8/4P3/7K/8 w - - 0 1"]
[PlyCount "47"]

{**CRAFTY:**} 1. e4 dxe4 {**7m, KPPKP(3)**, *dtf/m* = 17/23m.} 2. Kg3′′′′ e3′′ 3. Kf3′′′′ e2′′ 4. Kxe2′′′′ {**6m, KPPKPP**} b5′′ 5. Ke3′′′′ b4′′ 6. Kd4′′′′ b3′′ 7. Kc3′′′′ f5′′ 8. Kxb3′′′′ {**5m, KPPKP**. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} f4′′ 9. Kc3′ f3′′ 10. Kd2′ f2′′ 11. Ke2′′′′ f1=Q+′ 12. Kxf1′′′′ {**4m, KPPK**} Kh8′′ 13. Kf2′ Kg7° 14. Kf3′ Kh8′′ 15. Kf4′ Kg7° 16. Kf5′ Kh8′′ 17. Kg5′ Kg7° 18. h8=Q+′′ Kxh8′′ {**3m, KPK**} 19. Kf6′′′′ Kg8° 20. g7′′′′ Kh7° 21. Kf7′′′′ Kh6° 22. g8=Q′′ Kh5° 23. Qg3′′ Kh6° 24. Qg6#′ **1-0**

[Event "TS2.02, 8m"]
[Date "2015.05.04"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1pp5/3k3p/PP6/2P2K2/8/8/8 b - - 0 1"]
[PlyCount "31"]

{**CRAFTY:**} 1. ... Kd7′′′′ 2. Kg4′ Kc8′′′′ 3. Kh5′ Kb8′′′′ 4. Kh4′ Ka7′ 5. Kg4′ c6′ 6. Kf4′ cxb5′′ 7. cxb5′′′′ {**6m, KPPKPP**} Kb8′ 8. Kf5′ Kc8′′ 9. Ke5′ Kc7′ 10. Ke6′ h5′ 11. Ke5′ h4′ 12. Kf4′ Kd6′ 13. Kg4′ Kc5′ 14. a6′′′′ bxa6′′ {**5m, KPKPP**. This ends CRAFTY's line.} {SMFCZ-minimaxing continuation ...} 15. bxa6′′′′ {**4m, KPKP**} Kb6′ 16. Kxh4′ Kxa6′ {**2m, KK**} ½-½

[Event "TS2.03, 8m"]
[Date "2015.05.03"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "2k2K2/8/pp6/2p5/2P5/PP6/8/8 w - - 0 1"]
[PlyCount "83"]

{**CRAFTY:**} 1. a4′′′ Kd7′ 2. a5′′′ Kd6′′ 3. Kf7′′′ Kd7′′ 4. Kf6′′ Kd6′′ 5. Kf5′′ Kc7′′ 6. Ke6′′ Kc6′′ 7. Ke7′′ Kc7′′ 8. Ke8′′ Kc6′′ 9. Kd8′′ bxa5′′ {**7m, KPPKP(3)**} 10. Ke7′′′ Kc7′′ 11. Ke6′′′ Kc6′′ 12. Ke5′′ Kc7′ 13. Kd5′′ Kb6′′ 14. Kd6′′′ Kb7′′ 15. Kxc5′′ {**6m, KPPKPP**} Kc7′′ 16. Kd5′′ Kd7′′ 17. c5′′ Kc7′′ 18. c6′′ Kb8′ 19. Kd4′ Kc8′′ 20. Kc4′′ Kd8′ 21. Kd5′′ Ke7′ 22. Kc5′′ Ke6 {-3m/-5f}
({**SMFCZ-minimaxing line:**} 22. ... Kd8′′ 23. Kb6′′ Kc8′′ 24. Kxa6′′ {**5m, KPPKP**} Kc7′′ 25. Kb5′′ Kc8′′ 26. Kb6′′ Kd8′′ 27. c7+′′ Kd7′′ 28. Kb7′′ Kd6′ 29. c8=Q′′ Ke5′′ 30. Qg4′′ Kd5′ 31. Kb6′′ Ke5′′ 32. Kc5′ Kf6′′ 33. Kd6′′ Kf7′′ 34. Qg5′′ Kf8′′ 35. Qg6′′ a4° 36. Ke6′′ a3′′ 37. Qf7#′′)
23. c7 Kd7 24. Kb6 Kd6 25. Kxa5 {+8m: CRAFTY reached for the 5-man EGT. **5m, KPPKP**. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} Kxc7 26. Kxa6 Kb8 27. b4 Kc7 28. b5 Kb8 29. Kb6 Kc8 30. Ka7 Kd8 31. b6 Kd7 32. b7 Ke6 33. b8=Q Kf5 34. Qh2 Ke4 35. Kb6 Kd3 36. Kc5 Ke4 37. Qh4+ Kd3 38. Qe1 Kc2 39. Kc4 Kb2 40. Qd1 Ka2 41. Kc3 Ka3 42. Qa1# **1-0**

[Event "TS2.04, 10m"]
[Date "2015.05.09"]
[White "KP(4)"]
[Black "KP(4)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp3p2/8/6kp/8/3K1PP1/PP6/8 b - - 0 1"]
[PlyCount "39"]

{CRAFTY**:**} 1. ... f5 2. Ke2 f4 3. Kf2 fxg3+ 4. Kxg3′′ {**8m, KP(3)KP(3)**} h4+ {*dtf* = -18f} 5. Kh3′ b5 {+1f}
({**SMFCZ-minimaxing line:**} 5. ... a5′′ 6. a4′′ Kf4′′ 7. Kg2′′ h3+′ 8. Kh2′ Kxf3′′ 9. Kxh3′′ {**6m, KPPKPP**} Ke2′ 10. Kg2′ Kd2′ 11. Kf2′ Kc2′ 12. Ke2′ Kxb2′′ {**5m, KPKPP**} 13. Kd2′ Ka3′ 14. Kc1′ Kxa4′′ {**4m, KKPP**} 15. Ka2′ b4′′ 17. Kb2′′ b3′′ 18. Kc3′′ Ka3′′′ 19. Kd2′ b2′′ 20. Kc2′′ Ka2′′′ 21. Kd1′ b1=Q+′′ {**4m, KKQP**} 22. Ke2′′ Qf5′′ 23. Ke3′′ Kb3′′ 24. Kd4′ Qe6′′ 25. Kc5′′ Kc3′′ 26. Kb5° Qd6′′ 27. Kxa5′′ {**3m, KKQ**} Kc4′′ 28. Ka4° Qa6#′)
6. Kg2 Kf4 7. a3 Ke3 8. f4 {-4f} Kxf4 {**7m, KPPKP(3)**} 9. Kf2 {-1m} a5 10. Ke2 {-4m} Ke4 {+4m} 11. Kd2 {-7m} h3 12. a4 bxa4 {+1m: **6m, KPKP(3)**} 13. Kc3 a3 {+1m} 14. b3 h2 15. b4 {-1m} h1=Q 16. bxa5 {**5m, KPKQP**} a2 17. Kb4 {-1m} a1=Q {+1m} 18. a6 {-1m} Qxa6 {+1m, **4m, KKQQ**. *dtm* = -2m. SMFCZ-minimaxing continuation ...} 19. Kb3 Qha1 20. Kb4 Q1a3# **0-1**

[Event "TS2.05, 14m"]
[Date "2015.05.09"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp2k1pp/2p5/2P1p3/2P1P2P/6P1/P7/2K5 b - - 0 1"]
[PlyCount "79"]

{**CRAFTY:**} 1. ... g5 2. Kd2 Kf7 3. Ke3 Kg6 4. Kf3 Kh5 5. hxg5 Kxg5 {**12m, KP(5)KP(5)**} 6. Kg2 Kg4 7. Kf2 Kh3 8. Kf3 a6 9. a3 a5 10. a4 h5 11. Kf2 Kh2 12. Kf3 Kg1 13. g4 h4 14. g5 h3 15. Kg4 h2 16. Kf5 h1=Q 17. Kxe5 {**11m, KP(5)KQP(3)**} Qh2+ 18. Ke6 Qg3 19. Kf5 Qf3+ 20. Kg6 Qxe4+ {**10m, KP(4)KQP(3)**} 21. Kh5 Qe2+ 22. Kh6 Qxc4 {**9m, KP(3)KQP(3)**} 23. g6 {-2f}
(**{SMFCZ-minimaxing line:**} 23. Kg7′′ Qd4+′ 24. Kh7′′ Qh4+′′ 25. Kg6′′ Qf4′ 26. Kg7′′ Qxg5+′′ {**8m, KPPKQP(3)**} 27. Kf7′ Qe3′ 28. Kf6′ Kg2′ 29. Kf5′ Qe7′ 30. Kg6′′ Kg3′ 31. Kf5′ Kf3′′ 32. Kg6° Kg4′ 33. Kh6° Kf5′′ 34. Kh5° Qh7#′)
23. ... Qh4+ 24. Kg7 Qxa4 {**8m, KP(2)KQP(3)**} 25. Kg8 Qb3+ 26. Kh7 Qh3+ 27. Kg7 a4 28. Kg8 a3 29. g7 a2 30. Kf8 Qc8+ 31. Kf7 {SMFCZ-minimaxing continuation} a1=Q 32. g8=Q+ Qxg8+ {**7m, KPKQQPP**. *dtm* = -8m} 33. Kxg8 {**6m, KPKQPP**, *dtm* = 8m} Qe5 34. Kf8 Qc7 35. Ke8 Kf2 36. Kf8 Kf3 37. Ke8 Kf4 38. Kf8 Kf5 39. Kg8 Kf6 40. Kh8 Qg7# **0-1**

[Event "TS2.06, 16m"]
[Date "2015.05.09"]
[White "KP(7)"]
[Black "KP(7)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p6/p1p5/P1Pp2pp/1P1P1p1k/5P1P/6PK/8 w - - 0 1"]
[PlyCount "43"]

{**CRAFTY:**} 1. g4 fxg3+ {**15m, KP(6)KP(7)**} 2. Kg2 g4 3. hxg4 {**14m, KP(6)KP(6)**} Kg5 4. gxh5 Kxh5 5. Kxg3 {**11m, KP(5)KP(4)**} Kg5 6. f4+ Kh5 7. Kh3 Kh6 8. Kg4 Kg6 9. f5+ Kf6 10. Kf4 Kf7 11. Kg5 Kg7 12. f6+ Kh7 13. Kh5 Kg8 14. Kg6 Kf8 15. f7 Ke7 16. Kg7 Ke6 17. f8=Q Kd7 18. Qb8 b5 19. axb6 {**10m, KQP(4)KP(3)**} Ke6 20. Qe5+ Kd7 21. Kf8 Kd8 22. Qe8# **1-0**

[Event "TS2.07, 11m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1k6/p4p2/2p2P2/p1P2P2/2P5/P1K5/8 w - - 0 1"]
[PlyCount "35"]

{**CRAFTY:**} 1. Kd3′ (1. Kc1 {also draws, according to Newborn-Hyatt}) 1. ... Kc7′′ 2. Ke4′ Kd6′′ 3. Kf3′ Ke7′′ 4. Kg2′ Kf7′ 5. Kg3′ Kg8′ 6. Kg4′ Kf7′′ 7. Kh5 Kg7′′′ 8. a3′ a5′′′ 9. Kh4′ Kf7′ 10. Kg3′ Ke8′ 11. Kg2 Kd7′′ 12. Kf3 Ke7′′′ 13. Ke3′′ Kd7′′′ 14. Kf2′ Kd8′ 15. Ke2′′ Ke8′′′ 16. Kf1′ Kf7′ 17. Kg2′ Ke8′ 18. Kf1′ ½-½

[Event "TS2.08, 7m"]
[Date "2015.05.03"]
[White "KP(3)"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "k7/4p3/4p3/8/8/3P1P2/5P2/K7 w - - 0 1"]
[PlyCount "65"]

{**CRAFTY:**} 1. Kb2‴ e5 {voluntarily starting phase two.}
({**SMFCZ-minimaxing line:**} 1. ... Kb7″ 2. Kc3‴ e5″ 3. d4‴ Kc6″ 4. dxe5‴ {**6m, KP(3)KP**} Kd5″ 5. f4‴ Ke4″ 6. Kc4‴ Kf5″ 7. Kc5″ Kxf4″ {**5m, KPPKP**} 8. Kd5‴ Kf5″ 9. f3‴ Kg5″ 10. Ke4″ Kg6″ 11. f4″ e6″ 12. Kd3′ Kf5″ 13. Ke3‴ Kg6″ 14. Ke4″ Kf7″ 15. Kd4″ Ke7′ 16. Kc5″ Kd7″ 17. Kb6″ Kd8′ 18. Kc6″ Ke7″ 19. Kc7″ Ke8″ 20. Kd6″ Kf7″ 21. Kd7″ Kg6″ 22. Kxe6″ {**4m, KPPK**} Kh5″ 23. f5″ Kg5′ 24. f6″ Kg4′ 25. f7″ Kf4′ 26. f8=Q+″ {**4m, KQPK**} Ke4″ 27. Qa3′ Kd4″ 28. Kd6″ Kc4′ 29. e6″ Kd4″ 30. e7″ Ke4″ 31. e8=Q+″ {**4m, KQQK**} Kf4′ 32. Qe5+′ Kg4° 33. Qag3#″)
2. Kc3 Kb7 3. d4 Kc6 4. dxe5 {**6m, KP(3)KP**} Kd5 5. f4 Ke4 6. Kc4 Kf5 7. Kc5 Kxf4 {**5m, KPPKP**, *dtm* = 26m. This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 8. Kd5 Kf5 9. f3 Kg5 10. Ke4 Kg6 11. f4 e6 12. Kd3 Kf5 13. Ke3 Kg6 14. Ke4 Kf7 15. Kd4 Ke7 16. Kc5 Kd7 17. Kb6 Kd8 18. Kc6 Ke7 19. Kc7 Ke8 20. Kd6 Kf7 21. Kd7 Kg6 22. Kxe6 {**4m, KPPK**} Kh5 23. f5 Kg5 24. f6 Kf4 25. f7 Ke4 26. f8=Q Kd3 27. Kd5 Ke3 28. e6 Kd3 29. Qf3+ Kd2 30. Kc4 Kc2 31. Qe2+ Kc1 32. Kb3 Kb1 33. Qe1# **1-0**

[Event "TS2.09, 8m"]
[Date "2015.05.04"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "k7/8/1p6/p1p5/2P4K/8/PP6/8 w - - 0 1"]
[PlyCount "61"]

{**CRAFTY:**} 1. a4‴ Kb7″ 2. Kh5‴ Kc6′ 3. Kg5‴ Kc7″ 4. Kg6″ Kc6′ 5. b3″ Kc7″ 6. Kg7‴ Kc6′ 7. Kf8″ Kb7′ 8. Kf7‴ Kb8′ 9. Ke6′ Kc7″ 10. Ke7‴ Kc6″ 11. Kd8″ Kb7 {-1f}
({**SMFCZ-minimaxing line:**} 11. ... Kd6″ 12. Kc8″ Kc6″ 13. Kb8″ Kd6′ 14. Kb7″ Ke5′ 15. Kxb6″ {**7m, KP(3)KPP**, *dtm* = -16m} Kd6″ 16. Kxa5″ {**6m, KP(3)KP**} Kc6″ 17. b4″ cxb4″ 18. Kxb4″ {**4m, KPPK**} Kb6′ 19. a5+″ Ka6″ 20. c5″ Kb7″ 21. Kb5″ Kb8′ 22. c6′ Ka8′ 23. a6″ Kb8″ 24. Kc5″ Kc8″ 25. a7″ Kc7″ 26. Kd5″ Kd8″ 27. c7+″ Kd7′ 28. a8=Q″ Ke7″ 29. c8=Q″ Kf6′ 30. Qg8″ Kf5′ 31. Qaf8#″)
12. Kd7 Kb8 13. Kc6 Ka7 14. Kc7 Ka6 15. Kb8 b5 16. axb5+ {**7m, KP(3)KPP**} Kb6 17. Kc8 a4 18. bxa4 {**6m, KP(3)KP**} Ka5 19. Kd7 Kb4 20. b6 Kxc4 {**5m, KPPKP**, *dtm* = 11m. SMFCZ-minimaxing continuation ...} 21. b7 Kd4 22. b8=Q c4 23. a5 c3 24. Qb1 Kc4 25. Qc2 Kd4 26. Ke6 Kc4 27. a6 Kd4 28. a7 Kc4 29. a8=Q Kb4 30. Qb1+ Kc4 31. Qd5# **1-0**

[Event "TS2.10, 7m"]
[Date "2015.05.03"]
[White "KP(3)"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/p7/8/1P6/7p/P4k1P/3K4 w - - 0 1"]
[PlyCount "49"]

{**CRAFTY:**} 1. a3′′′′ Kf1′ 2. Kd2′′′′ Kf2′′ 3. Kd3′′′ Kf3′′ 4. Kd4′′′ Kf2′′ 5. Ke4′′′ Kg2′′ 6. Ke3′′′′ Kg1′ 7. Kf3′′ Kxh2′′ {**6m, KPPKPP**} 8. Kf2′′ Kh1′′ 9. Kg3′′′′ Kg1′′ 10. Kxh3′′ {**5m, KPPKP**. This ends CRAFTY's line.} {SMFCZ-minimaxing continuation ...} Kf2′′ 11. a4′′′′ Ke3′′ 12. b5′′′′ axb5′′ 13. axb5′′′′ {**3m, KPK**} Kd3′ 14. b6′′ Kc3′ 15. b7′′ Kb3′ 16. b8=Q+′′ Kc4′′ 17. Qa7′ Kb5′ 18. Qc7′ Ka6′ 19. Qb8′ Ka5° 20. Kg4′ Ka6′ 21. Kf5′ Ka5° 22. Ke4′ Ka6′ 23. Kd5′ Ka5° 24. Kc5′′ Ka4′ 25. Qb4#′′ **1-0**

[Event "TS2.11, 7m"]
[Date "2015.05.03"]
[White "KP(3)"]
[Black "KPP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p1p/8/6k1/8/6P1/5PP1/7K w - - 0 1"]
[PlyCount "77"]

{**CRAFTY:**} 1. Kh2′′′′ f6′′ 2. Kh1′′′′ f5′′ 3. Kg1′′′′ Kf6′′ 4. Kf1′′ Ke5′′ 5. Ke1′′′′ Kd5′′ 6. Kd1′′′′ Ke5′′ 7. Kc2′′ Kd4′′ 8. Kd2′′′′ Ke4 {-1m}
({**SMFCZ-minimaxing line:**} 8... h6′′ 9. Ke2′′ Ke4′′ 10. Kf1′′ Kd4′ 11. Kg1′′ Ke5′′ 12. Kh2′′ Kf6′′ 13. Kh3′′ h5′′ 14. Kh4′′ Kg6′′ 15. f3′′ Kh6′′ 16. g4′′′′ hxg4′′ 17. fxg4′′′′ fxg4′′ 18. Kxg4′′′′ {**3m, KPK**} Kg6′′ 19. g3′′ Kf6′ 20. Kh5′′ Kg7′′ 21. Kg5′′′′ Kh7′′ 22. Kf6′′ Kh8′′ 23. g4′′ Kg8′′ 24. Kg6′′ Kh8′′ 25. g5′′ Kg8° 26. Kh6′′ Kf7′′ 27. g6+′′ Kf8′′ 28. Kh7′′′′ Ke7′′ 29. g7′′ Kd6′′ 30. g8=Q′′ {**3m, KQK**} Kc5′′ 31. Qb3′ Kd4′ 32. Kg6′ Kc5′′ 33. Kf5′ Kd4′ 34. Qa4+′ Kc5′ 35. Ke6′ Kb6° 36. Kd6′′ Kb7° 37. Qb5+′ Ka8′ 38. Kc6′ Ka7° 39. Qb7#′′)
9. Ke2 h6 10. Kf1 Kd4 11. Kg1 Ke5 12. Kh2 Kf6 13. Kh3 h5 14. Kh4 Kg6 15. f3 Kh6 16. g4 hxg4 17. fxg4 {**5m, KPPKP**, *dtm* = -22m.This ends CRAFTY's line.} {SMFCZ-minimaxing continuation ...} fxg4 18. Kxg4 Kg6 19. g3 Kf6 20. Kh5 Kg7 21. Kg5 Kh7 22. Kf6 Kh8 23. g4 Kg8 24. Kg6 Kh8 25. g5 Kg8 26. Kh6 Kf7 27. g6+ Kf8 28. Kh7 Ke7 29. g7 Kd6 30. g8=Q Kc5 31. Kg6 Kd4 32. Kf5 Kd3 33. Ke5 Ke3 34. Qb3+ Ke2 35. Ke4 Kf2 36. Qf3+ Ke1 37. Qg2 Kd1 38. Kd3 Kc1 39. Qc2# **1-0**

[Event "TS2.12, 11m"]
[Date "2015.05.05"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "3k4/3p4/3p4/p2P2p1/P2P2P1/3P4/3K4/8 w - - 0 1"]
[PlyCount "55"]

{'Christmas Cracker' (Baker, 1919). **CRAFTY:**} 1. Kd1′′ Kc7′ 2. Ke2′′ Kd8′′ 3. Kd2′′ {pos 3b = pos 1w with btm, and now the bK is committed left or right!} Ke7′ 4. Kc3′′ Ke8′ 5. Kc4′′ Kd8′′ 6. Kb5′′ Kc7′ 7. Kxa5′′ {**10m, KP(5)KP(3)**} Kb7′′ 8. Kb5′ Ka7′ 9. a5′′ Kb7′′ 10. a6+′′ Ka7′ 11. Ka5′′ Ka8′′ 12. Kb6′′ Kb8° 13. a7+′′ Ka8′′ 14. Kc7′′′′ Kxa7° 15. Kxd7′ {**8m, KP(4)KPP**} Kb6′ 16. Kxd6′′ {**7m, KP(4)KP**} Kb7 {-1m}
({**SMFCZ-minimaxing line:**} 16. ... Kb5′ 17. Ke6′ Ka5′ 18. d6′′ Kb4′′ 19. d7′′ Kc3′′ 20. d8=Q′′ Kd2′′ 21. Qxg5+′′ {**6m, KQP(3)K**} Ke2′ 22. Ke5′ Ke1′ 23. Qe3+′ Kd1′′ 24. Qf2′ Kc1° 25. d5′′ Kb1′ 26. Kd4′′ Ka1′ 27. Kc3′′ Kb1° 28. Qb2#′′)
17. Ke6 Ka6 18. d6 Ka5 19. d7 Kb4 20. d8=Q Kc3 21. d5 Kd4 22. d6 Ke3 23. Qf6 Kxd3 {**6m, KQPPKP**} 24. d7 Kc2 25. d8=Q Kb3 26. Qb6+ Kc2 27. Qfb2+ Kd1 28. Qg1# **1-0**

[Event "TS2.13, 14m"]
[Date "2015.05.09"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/7p/2k1Pp2/pp1p2p1/3P2P1/4P3/P3K2P/8 w - - 0 1"]
[PlyCount "57"]

{This is also position TS1.15. **CRAFTY:**} 1. e4 dxe4 {**13m, KP(5)KP(6)**} 2. Ke3 Kd6 3. d5 b4 4. Kxe4 {**12m, KP(5)KP(5)**} a4 5. Kd3 Ke7 6. Kc4 b3 7. axb3 {**11m, KP(5)KP(4)**} a3 8. Kc3 f5 9. gxf5 {**10m, KP(5)KP(3)**} h5 10. b4 g4 11. b5 h4 12. b6 a2 13. Kb2 g3 14. d6+ Kxd6 {**9m, KP(4)KP(3)**} 15. b7′′ Kc7 {-1f}
({**SMFCZ-minimaxing line**:} 15. ... a1=Q+′ 16. Kxa1′′′ {**8m, KP(4)KPP**} Kc7′ 17. b8=Q+′′ Kc6 (*{though obviously more 'chessic' is} 17... Kxb8′′{**7m, KP(3)KPP**} 18. e7′′Kc7′′19. e8=Q′′Kd6′′20. Qe4′gxh2′′21. f6′′ Kd7′′22. f7′′h1=Q+′23. Qxh1′′′Ke7′′24. Qb7+′′Kf8′′25. Qd7′′Kg7′′26. Qe7′Kg6′27. f8=Q′′Kh5′28. Qe5+′ Kg6°29. Qef5#′′*) 18. hxg3′′ {**7m, KP(4)KPP**} Kd5′′ 19. e7′′ Ke4′′ 20. e8=Q+′′ Kf3′′ 21. Qe1′ Kg2′ 22. gxh4′′ {**6m, KQQKPP**} Kf3′ 23. Qbg3#′′)
16. e7 g2 {-1f} 17. b8=Q+ Kxb8 {**8m, KP(3)KP(3)**} 18. e8=Q+ Kc7 19. Qe7+ Kc6 20. Qe4+ Kd6 21. Qxg2 {**7m, KQPPKP(2)**. *dtm* = -8m.} a1=Q+ 22. Kxa1 {**6m, KQPPKP**} Ke5 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 23. Qg5 Kd6 24. f6 Ke6 25. h3 Kd6 26. f7 Kc6 27. f8=Q Kb6 28. Qa8 Kc7 29. Qgd8# **1-0**

[Event "TS2.14, 15m"]
[Date "2015.05.09"]
[White "KP(7)"]
[Black "KP(6)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p2/2kp1p1p/p1p2P2/2P5/7P/PP3PP1/6K1 w - - 0 1"]
[PlyCount "55"]

{**CRAFTY:**} 1. g4 d5 2. b3 d4 3. Kf1 Kd6 4. f4 Kc6 5. h4 Kd7 6. Ke2 Ke7 7. Kd3 Ke8 8. h5 Ke7 9. a4 Ke8 10. b4 axb4 {**14m, KP(6)KP(6)**} 11. a5 Kd7 12. Kc2 b3+ 13. Kxb3 {**13m, KP(6)KP(5)**} d3 14. Kc3 d2 15. Kxd2 {**12m, KP(6)KP(4)**} Kc7 16. g5 fxg5 17. fxg5 hxg5 {**9m, KP(4)KP(3)**} 18. h6″ Kb7′ 19. h7″ Ka6′ 20. h8=Q″ Kxa5 {**8m, KQPPKP(3)**}
({FRITZ10 line:} 20... Ka7 21. Qc8 f6 22. a6 Kb6 23. Qb7+ Ka5 24. Qb5#)
({FRITZ10 line:} 20... Kb7 21. Qd8 Kc6 22. a6 f6 23. a7 g4 24. a8=Q#)
21. Ke3 {-3f. This ends CRAFTY's line.}
({**SMFCZ-minimaxing line:**} 21. Qf6″ Kb4″ 22. Qc3+′ Ka4° 23. Qb2′ f6′ 24. Kc3″ Ka5″ 25. Qb5#″)
{SMFCZ-minimaxing continuation:} 21. ... Kb6″ 22. Qf6+′ Kb7′ 23. Ke4″ Kc7″ 24. Qa6′ Kd7′ 25. Kd5″ Kc7′ 26. Qa7+″ Kc8′ 27. Kc6′ Kd8″ 28. Qd7#″ **1-0**

[Event "TS2.15, 12m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p3k2/p4ppp/3P4/1P6/4K2P/1P4P1/8 w - - 0 1"]
[PlyCount "61"]

{**CRAFTY:**} 1. g4 Ke7 2. h4 Kd6 3. Ke4 Kc7 4. h5 gxh5 5. gxh5 {**10m, KP(4)KP(4)**} Kd6 6. Kf5 Kxd5 7. Kxf6 {**8m, KP(3)KP(3)**} Ke4′ 8. Kg6′ Ke5″ 9. Kxh6″ {**7m, KP(3)KP(2)**} Kf6″ 10. b5 {+1f}
({**SMFCZ-minimaxing line:**} 10. b3″ b6″ 11. b5″ axb5″ {**6m, KPPKPP**} 12. b4″ Kf7″ 13. Kg5″ Kg7″ 14. Kf5″ Kh6″ 15. Ke5′ Kxh5″ {**5m, KPKPP**} 16. Kd5′ Kg6′ 17. Kc6″ Kf6′ 18. Kxb5″ Ke7′ 19. Kxb6″ Kd7′ 20. b5″ Kc8′ 21. Ka7″ Kc7′ 22. b6+″ Kc6′ 23. b7″ Kd5″ 24. b8=Q″ Ke4″ 25. Kb6′ Kf5′ 26. Kc5′ Ke4′ 27. Kc4′ Kf5′ 28. Kd5″ Kf6′ 29. Qe5+′ Kg6′ 30. Ke6″ Kh7″ 31. Qg3′ Kh6′ 32. Kf6″ Kh5′ 33. Qh3#′)
10. ... a5 11. b6 a4 12. Kh7 Kf7 13. h6 Kf8 14. Kg6 Kg8 15. Kf6 Kh7 16. Ke6 Kxh6 {**6m, KPPKPP**} 17. Kd6 Kg5 18. Kc7 Kf4 19. Kxb7 {**5m, KPPKP**} a3 20. bxa3 {**4m, KPPK**} Ke4 21. Kc7 Kd5 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 22. b7 Kc4 23. b8=Q Kd4 24. Qb4+ Kd3 25. Kd6 Ke3 26. Ke5 Kd3 27. Kf4 Ke2 28. Qc3 Kf2 29. Qb2+ Ke1 30. Ke3 Kd1 31. Qb1# **1-0**

[Event "TS2.16, 12m"]
[Date "2015.05.09"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/4pk2/1p4p1/1P2p3/3pP2P/3K2P1/4P3/8 w - - 0 1"]
[PlyCount "71"]

{**CRAFTY:**} 1. Kc4 e6 2. Kd3 Kg7 3. Kd2 g5 4. hxg5 {**11m, KP(5)KP(4)**} Kg6 5. Ke1 Kxg5 {**10m, KP(4)KP(4)**} 6. Kf2′′ Kg4 {-1f}
({**SMFCZ-minimaxing line:**} 6. ... Kh5′′ 7. Kg2′′ Kg4′′ 8. Kh2′′ Kg5′′ 9. Kh3′′ Kh5′′ 10. g4+′′ Kg5′′ 11. Kg3′′ Kg6′′ 12. Kh4′′ Kh6′′ 13. g5+′′ Kg6′′ 14. Kg4′′′′ Kf7′ 15. Kh5′′ Kg7′′ 16. g6′′ Kg8′′ 17. Kg4′ Kf8′ 18. Kh4′′ Kg8′′ 19. Kh5′′ Kg7′′ 20. Kg5′′′′ Kg8′′ 21. Kf6′′ Kf8′′ 22. Kxe5′′ {**9m, KP(4)KP(3)**} Kg7′′ 23. Kxe6′′ {**8m, KP(4)KPP**} d3′′ 24. exd3′′′′ Kxg6′′ {**6m, KP(3)KP**} 25. e5′′ Kg7′ 26. Kd6′′ Kf7′ 27. e6+′′ Kf8′′ 28. Kd7′′ Kg7′ 29. e7′′ Kf6′ 30. e8=Q′′ Kf5′ 31. Qe4+′′ Kg5′ 32. Ke6′ Kh6′′ 33. Qg2′ Kh5′ 34. Kf5′′ Kh4′ 35. Qh2#′)
7. Kg2 Kh5 8. Kh3 Kg5 9. g4 Kg6 10. Kh4 Kh6 11. g5+ Kg6 12. Kg4 Kf7 13. Kh5 Kg7 14. g6 Kg8 15. Kg4 Kh8 16. Kh4 Kg8 17. Kh5 Kg7 18. Kg5 Kg8 19. Kf6 Kf8 20. g7+ Kg8 21. Kxe5 Kxg7 22. Kxe6 {**7m, KP(3)KP(2)**. also minimaxing, SMFCZ:} Kg6 23. e5 Kg5 {CRAFTY only:} 24. Kf7 ({SMFCZ-minimaxing line:} 24. Kd6 Kf4 25. e6 Ke3 26. e7 Kxe2 27. e8=Q+ Kf3 28. Qe1 Kf4 29. Qe2 Kg3 30. Ke5 d3 31. Qxd3+ Kg4 32. Qc3 Kg5 33. Qg3+ Kh5 34. Kf5 Kh6 35. Qg6#) 24... Kf4 25. e6 Ke3 26. e7 Kxe2 {**6m, KP(2)KP(2)**} 27. e8=Q+ Kd3 {This ends CRAFTY's line. SMFCZ-minimaxing continuation ...} 28. Qe5 Kc4 29. Ke6 d3 30. Qb2 d2 31. Qxd2 Kc5 32. Qc3+ Kxb5 33. Kd5 Ka6 34. Kc6 Ka7 35. Qg7+ Ka6 36. Qa1# **1-0**

{The KP-endgame test sets with the other side to move}

{The KP-endgame test set TS1 with the ostm}s

[Event "TS1.01, 5m, ostm"]
[Date "2015.06.20"]
[White "KPP"]
[Black "KP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "6k1/7p/5P1K/8/8/8/7P/8 b - - 0 1"]
[PlyCount "33"]

1. ... Kf7′′′′ 2. Kg5′ Ke6′′′′ 3. h3′ Kf7′′′′ 4. h4′′ Ke6′ 5. h5′′ Kf7′′′′ 6. h6′′ Ke6′ 7. Kf4 Kxf6′′ {**4m, KPKP**} 8. Kg4′′ Kg6′′ 9. Kh4′ Kxh6′′ {**3m, KKP**} 10. Kh3′ Kg5′ 11. Kh2′ h5′′ 12. Kh1′ h4′′ 13. Kh2′ Kg4′ 14. Kg1′ h3′′ 15. Kh1′ Kg3′ 16. Kg1′ h2+′′ 17. Kh1′′′′ Kh3′′ ½-½

[Event "TS1.02, 5m, ostm"]
[Date "2015.06.20"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/2k5/p1P5/P1K5/8/8/8/8 b - - 0 1"]
[PlyCount "24"]

1. ... Kc8′′ 2. Kb6′′ Kb8′′ 3. Kxa6′′ {**4m, KPPK**} Kc7′′ 4. Kb5′′′′ Kc8′′ 5. a6′′ Kb8′′ 6. Kc5′′ Kc8′′ 7. a7′′ Kc7′′ 8. Kd5′′ Kd8′′ 9. c7+′′ Kd7′ 10. a8=Q′′ {**4m, KQPK**} Ke7′′ 11. c8=Q′′ {**4m, KQQK**} Kf6′ 12. Qg8′′ Kf5′ 13. Qaf8#′′ **1-0**

[Event "TS1.03, 5m, ostm"]
[Date "2015.06.20"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "4k3/4Pp2/5P2/4K3/8/8/8/8 b - - 0 1"]
[PlyCount "24"]

1. ... Kd7° 2. Kf5′ Ke8′′ 3. Kg5′′ Kd7° 4. Kh6′′ Ke8′′ 5. Kg7′′ Kd7° 6. Kxf7′ {**4m, KPPK**} Kd6′ 7. e8=Q′′ {**4m, KQPK**} Kd5′ 8. Qa4′ Ke5′′ 9. Qc4′′ Kf5′′ 10. Kg7′′ Ke5′′ 11. f7′′ Kd6′′ 12. f8=Q+′′ {**4m, KQQK**} Ke5′ 13. Qf6#′ **1-0**

[Event "TS1.04, 5m, ostm"]
[Date "2015.06.22"]
[White "KPP"]
[Black "KP"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p2/8/4K1P1/5Pk1/8/8/8 b - - 0 1"]
[PlyCount "26"]

1. ... Kh5′ 2. Kf6′′ Kg4′ 3. Kxf7′′ {**4m, KPPK**} Kf5′ 4. g6′′ Ke4′ 5. g7′′ Kd5′ 6. g8=Q′′ {**4m, KQPK**} Kd4′ 7. Qg3′ Kc4′′ 8. Qe3′′ Kb4′′ 9. Ke6′ Kc4′′ 10. Kd6′′ Kb4′′ 11. Kd5′ Ka5′ 12. Qb3′′ Ka6° 13. Kc6′′ Ka7′ 14. Qb7#′′ **1-0**

[Event "TS1.05, 6m, ostm"]
[Date "2015.06.22"]
[White "KPP"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/2pp3k/8/1P1P3K/8/8/8 b - - 0 1"]
[PlyCount "22"]

1. ... d5′′ 2. Kg4′′′′ Kg6′ 3. Kf4′′′′ Kf6′ 4. Kg4′′′′ Ke6′ 5. Kf4′′′′ Kd6′ 6. Ke3′′′′ Kc7′ 7. Kd3′ Kb6′ 8. Kc2′ Kb5′ 9. Kb3′′′′ Ka6′ 10. Kb2′ Kb6′ 11. Kc3′ Kb5′ 12. Kb3′′′′ {repeating} ½-½

[Event "TS1.06, 6m, ostm"]
[Date "2015.06.22"]
[White "KPP"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/3pkp2/8/8/3PK3/5P2/8 b - - 0 1"]
[PlyCount "18"]

1. ... Ke5′ 2. f4+′ Kd5′ 3. d4′′′′ f5′′ 4. Kd3′′′′ Kc6′′′′ 5. Kc2′ d5′′ 6. Kb2′ Kb5′ 7. Kb3′′′′ Ka5′′′′ 8. Ka3′′′′ Kb5′′′′ 9. Kb3′′′′ Ka5′′′′ 10. Ka3′′′′ {forced repetition} ½-½

[Event "TS1.07, 7m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/2ppk3/8/2PPK3/2P5/8/8 b - - 0 1"]
[PlyCount "15"]

1. ... d5+′ 2. cxd5+′′ cxd5+′′′′ {**5m, KPPKP**} 3. Kd3′ Kd6′ 4. c4′′ dxc4+′′′′ 5. Kxc4′′ {**3m, KPK**} Kc6′′′′ 6. d5+′′ Kb6′ 7. d6′′ Kc6′′′′ 8. d7′′ Kxd7′′ ½-½

[Event "TS1.08, 10m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/ppp5/8/PPP3kp/8/6KP/8/8 b - - 0 1"]
[PlyCount "11"]

1. ... b6′′′′ 2. axb6′ axb6′′′′ 3. cxb6′′′′ cxb6′′′′ {**4m, KPKP**} 4. Kf3′′′′ Kh4′′′′ 5. Kg2′′′′ Kg5° 6. Kf3′′′′ Kh4′′′′ {forced repetition} ½-½

[Event "TS1.09, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1k3ppp/8/3K4/7P/5PP1/8/8 b - - 0 1"]
[PlyCount "22"]

1. ... Kc7′ 2. f4′ h5′ 3. f5′ Kd7′ 4. g4′′ hxg4′′ {**7m, KP(2)KP(3)**} 5. Ke4′′′′ g3′ 6. Kf3′′′′ g2′′ 7. Kxg2′′′′ {**6m, KPPKPP**} g6′′ 8. fxg6′′ fxg6′′′′ {**4m, KPKP**} 9. h5′′ gxh5′′ {**3m, KKP**} 10. Kh3′ Ke6 11. Kh4′ Kf6′ 12. Kxh5′′ {**2m, KK**} ½-½

[Event "TS1.10, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/2p5/3k4/1p1p1K2/8/1P1P4/2P5/8 b - - 0 1"]
[PlyCount "15"]

1. ... Kc5 2. Ke5 d4′′′′ 3. Ke4′′′′ Kb4′′′′ 4. Kxd4′′′′ {**7m, KP(3)KPP**} c6′′′′ 5. c4′′ Kxb3′′′′ 6. cxb5′′ cxb5′′′′ {**4m, KPKP**} 7. Kc5′ Kc3′′ 8. Kxb5′′ Kxd3′′ {**2m, KK**} ½-½

[Event "TS1.11, 9m, ostm"]
[Date "2015.06.22"]
[White "KP(4)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/k7/3p4/p2P1p2/P2P1P2/8/8/K7 b - - 0 1"]
[PlyCount "27"]

1. ... Kb7′ 2. Kb2′ Kc8′ 3. Kc3′ Kb7′′′ 4. Kc4′ Kb6′′′ 5. Kb3′ Kc7′ 6. Kc3′ Kb7′′′ 7. Kd3′ Kc7′′′ 8. Ke3′ Kd7′ 9. Kf3′ Ke7′ 10. Kg3′ Kf6′ 11. Kh4′ Kg6′′′ 12. Kh3′ Kg7′ 13. Kg3′ Kh6′ 14. Kh4′ Kg6′′′ {repetition} ½-½

[Event "TS1.12, 11m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/p6p/1p3kp1/1P6/P4PKP/5P2/8 b - - 0 1"]
[PlyCount "49"]

1... h5 2. h4 (2. f4 gxf4+ {**10m, KP(4)KP(4)**} 3. Kf3 Ke5 4. Ke2 Ke4 5. h4 f3+ 6. Kd2 Kd4 7. Kc2 Kc4 8. Kd2 Kb3 9. Ke3 Kxa3 10. Kxf3 Kxb4 {**7m, KP(2)KP(3)** *dtm* = -19m}) 2... gxh4+ 3. Kxh4 {**9m, KP(4)KP(3)**} Kf4 4. Kxh5 {**8m, KP(4)KPP**: FINALGEN analyses from here} Kxf3′′ {**7m, KP(3)KPP**: *dtm* = -21m} 5. Kg5′ Kxf2′′′ {**6m, KPPKPP**} 6. Kf4′ Ke2′′′ 7. Ke4′ Kd2′′′ 8. Kd4′ Kc2′′′ 9. Kc5′ Kb2′ 10. Kd4′′ Kxa3′′ {**5m, KPKPP**} 11. Kc3′′ Ka4′′ 12. Kc2′′ Kxb4′′ 13. Kb2′′ a5′′ 14. Kc2′ a4′′ 15. Kb2′ Kc4′′ 16. Ka3′ Kc3′′ 17. Ka2° b4′′ 18. Kb1′′ b3′′ 19. Kc1′′ b2+′′ 20. Kd1′′ b1=Q+′′ 21. Ke2° Qf5′′ 22. Ke3′′ a3′′ 23. Ke2° Qf4′′ 24. Ke1′′ Kd3′′ 25. Kd1° Qd2#′′ **0-1**

[Event "TS1.13, 14m, ostm"]
[Date "2015.06.22"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/1ppk4/p4pp1/P1PP2p1/2P1K1P1/7P/8 w - - 0 1"]
[PlyCount "38"]

1. Kd2 b5 2. cxb5 cxb5 3. axb5 {**11m, KP(5)KP(4)**} a4 4. c4 a3 5. Kc3 f4 6. c5+ Kd7 7. Kc2 f3 8. Kb3 f2 9. Kxa3 {**10m, KP(5)KP(3)**} f1=Q 10. b6 Kc6 11. Kb2 Qd3 12. d5+ Kxd5 {**9m, KP(4)KQPP**} 13. b7 Qb5+ 14. Kc3 Qxb7 {**8m, KP(3)KQPP**} 15. c6 Qxc6+ {**7m, KPPKQPP**} 16. Kd3′′ Qf6′ 17. Ke3′ Qf3+′ 18. Kd2° Kc4′′ 19. Kc2′ Qc3+′ 20. Kd1′ Kd3′′ 21. h3′ Qa1#′ **0-1**

[Event "TS1.14, 12m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp5p/8/PP2k3/2P2pp1/3K4/6PP/8 b - - 0 1"]
[PlyCount "37"]

1. ... a6 2. h4 gxh3 3. bxa6 bxa6 4. gxh3 {**8m, KP(3)KP(3)**} f3 5. Ke3 f2 6. Kxf2 {**7m, KP(3)KPP**, =. FRITZ10 scores -4.26} Kd4′ 7. c5′ Kxc5′′ {**6m, KPPKPP**} 8. Ke3′′′ Kb4 9. Kd4′′′ Kxa5′′ {**5m, KPKPP**} 10. Kc5′′′ h5′ 11. h4′′′ Ka4° 12. Kc4′′′ a5′′ 13. Kc3′′′ Ka3′ 14. Kc4′′′ a4′′ 15. Kc3′′′ Ka2° 16. Kc2′′′ a3′′ 17. Kc1′′′ Kb3′ 18. Kb1′′′ a2+′′ 19. Ka1′′′ Ka3′ ½-½

[Event "TS1.15, 14m, ostm"]
[Date "2015.06.22"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/7p/2k1Pp2/pp1p2p1/3P2P1/4P3/P3K2P/8 b - - 0 1"]
[PlyCount "37"]

1. ... b4 2. Kd3 a4 3. e4 dxe4+ 4. Kxe4 {**12m, KP(5)KP(5)**} b3 5. axb3 {**11m, KP(5)KP(4)**} a3′′′ 6. Kf5 a2′′′ 7. e7 Kd7′′′ 8. Kxf6 {**10m, KP(5)KP3)**} a1=Q 9. e8=Q+ Kxe8′′′ 10. Kxg5 Qxd4 {**7m, KP(3)KQP**. *dtm* = -9m} 11. Kf5′′ Qe3′ 12. h3′ Ke7′ 13. g5′′ Kd6′′ 14. Kg4′′ Ke5′ 15. h4′′ Qf2′′ 16. b4′′ Qg2+′ 17. Kh5° Qe4′′ 18. b5′′ Kf4′′ 19. Kh6′′ Qg6#′′ **0-1**

[Event "TS1.16, 12m, ostm"]
[Date "2015.06.22"]
[White "KP((5)"]
[Black "KP(5)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/6p1/3k1p2/2p2Pp1/2P1p1P1/1P4P1/4K3/8 b - - 0 1"]
[PlyCount "36"]

1. ... Kc6 2. Ke3′′′ Kc7′ 3. Kxe4′′′ {**11m, KP(5)KP(4)**} Kc6′ 4. Kd3′′ Kd6′ 5. Kc3′′ Ke5 6. b4′′ cxb4+′′ 7. Kxb4′′ {**9m, KP(4)KP(3)**} Kd6′′ 8. Kb5′′ Kc7′′ 9. Kc5′′ Kb7′ 10. Kd6′′ Kc8′′ 11. c5′′ Kd8′′ 12. c6′′ Kc8′′ 13. c7′′ g6′′ 14. fxg6′′ {**8m, KP(4)KPP**} f5′′ 15. g7′′ Kb7′′ 16. g8=Q′ {**8m, KQP(3)KPP**} Ka6′ 17. c8=Q+′′ {**8m, KQQPPKPP**} Kb5′ 18. Qgc4+′ Kb6′ 19. Q8c7#′ **1-0**

{The KP-endgame test set TS2, ostm}

[Event "TS2.01, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p4kP/5pP1/3p4/8/4P3/7K/8 b - - 0 1"]
[PlyCount "31"]

1. ... b5′′′ 2. Kg2 b4′′′ 3. Kf2 b3′ 4. Ke2 b2′′ 5. Kd2 b1=Q′′ {**8m, KP(3)KQPP**} 6. Kc3′ Qxg6′′ {**7m, KPPKQPP**, *dtm* = -10m} 7. h8=Q+′ Kxh8′′′ {**6m, KPKQPP**} 8. Kd4′ Qe4+′′ 9. Kc3′′ Qxe3+′′ {**5m, KKQPP**} 10. Kb4′′ d4′′ 11. Kc4′ Qc3+′′ 12. Kb5′′ d3′′ 13. Kb6′ d2′′ 14. Kb5′ d1=Q′′ {**5m, KKQQP**} 15. Kb6′ Qb1+′ 16. Ka6′ Qca1#′ **0-1**

[Event "TS2.02, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1pp5/3k3p/PP6/2P2K2/8/8/8 w - - 0 1"]
[PlyCount "33"]

1. a6′′′ bxa6′′ 2. bxa6′′′ {**6m, KPPKPP**} Kc6′′ 3. c5′′′ h5′′ 4. Kg5′ h4′′ 5. Kxh4′′ {**5m, KPPKP**} Kb5′ 6. a7′′′ Kc6′′ 7. a8=Q+′′ Kxc5′′ {**4m, KQKP**} 8. Qe4′ Kd6′ 9. Kg4′ Kc5′ 10. Kf5′′ Kd6′ 11. Qd3+′ Kc5′ 12. Ke6′′ Kc6′ 13. Qc4+′′ Kb6′ 14. Kd7′′ Ka5′ 15. Qb3′′ Ka6′′ 16. Kc6′′ Ka7′ 17. Qb7#′′ **1-0**

[Event "TS2.03, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "2k2K2/8/pp6/2p5/2P5/PP6/8/8 b - - 0 1"]
[PlyCount "14"]

1. ... b5′′ 2. a4′′ Kc7′′′ 3. axb5′ axb5′′′ 4. cxb5′′ {**5m, KPPKP**} Kb6′ 5. Ke7′ Kxb5′′ {**4m, KPKP**} 6. Kd6′ Kb4′ 7. Kd5′ Kxb3′′ 8. Kxc5′′′ {**2m, KK**} ½-½

[Event "TS2.04, 10m, ostm"]
[Date "2015.06.22"]
[White "KP(4)"]
[Black "KP(4)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp3p2/8/6kp/8/3K1PP1/PP6/8 w - - 0 1"]
[PlyCount "24"]

$$ 1. Ke4 a5 2. b3 f5+ 3. Ke5 b5 4. a3′′′ a4 5. b4′′′ f4′′′ 6. gxf4+′′′ {**9m, KP(4)KP(3)**} Kg6′′′ 7. f5+′′ Kf7′′′ 8. Kf4′ Kf6′′′ 9. Ke4′′′ Ke7′ 10. Kf4′ Kf6′′′ 11. Ke4′′′ {repetition} Kg7′ 12. Kf4′ Kf6′′′ {threefold repetition} **½-½**

[Event "TS2.05, 14m, ostm"]
[Date "2015.06.22"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/pp2k1pp/2p5/2P1p3/2P1P2P/6P1/P7/2K5 w - - 0 1"]
[PlyCount "12"]

1. g4 h6 2. Kd2 Kf6 3. a3 Kf7 4. a4 a5 5. Ke3 g6 6. g5 h5 {dead draw} ½-½

[Event "TS2.06, 16m, ostm"]
[Date "2015.06.22"]
[White "KP(7)"]
[Black "KP(7)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p6/p1p5/P1Pp2pp/1P1P1p1k/5P1P/6PK/8 b - - 0 1"]
[PlyCount "49"]

1. ... g4′′′ 2. Kg1 gxf3′′′ {**15m, KP(6)KP(7)**} 3. Kf2 fxg2′′′ 4. Kxg2 {**13m, KP(5)KP6)**} f3+′′ 5. Kxf3 Kxh3′′′ {**11m, KP(4)KP(5)**} 6. Kf4 Kg2 7. Ke5 h4′′ 8. Kd6 h3′′ 9. Kc7 h2′′ 10. Kxb7 h1=Q′′ 11. Kxc6 {**9m, KP(4)KQPP**} Kf3 12. b5 Ke4 13. Kb7 Qh7+ 14. Kb8 Qg8+ 15. Kc7 axb5 {**8m, KP(3)KQPP**} 16. Kd6 Qc8 17. a6 Qxa6+ {**7m, KPPKQPP**} 18. Kc7′′ b4 19. Kd7′′ Kxd4′′ {**6m, KPKQPP**} 20. c6′′ Ke5′′ 21. c7′′ Qb7′′ 22. Kd8′′ Kd6′′ 23. Ke8′′ Qxc7′′ {**5m, KKQPP**} 24. Kf8° Qh7′′ 25. Ke8 Qg8#′ **0-1**

[Event "TS2.07, 11m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1k6/p4p2/2p2P2/p1P2P2/2P5/P1K5/8 b - - 0 1"]
[PlyCount "25"]

1. ... Kc6 2. a3′′ Kb6′ 3. Kd3′ Kc6′ 4. Ke4′ Kd6′′′ 5. Ke3′ Kd7′ 6. Kd3′ Kc7′ 7. Ke4′ Kd6′′′ {repetition} 8. Kf3′ Ke7′′′ 9. Kg4′ Kf7′ 10. Kh5′ Kg7′′′ 11. Kh4′ Kg8′ 12. Kg4′ Kf8′ 13. Kh5′ Kg7′′′ {repetition - second block} ½-½

[Event "TS2.08, 7m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "k7/4p3/4p3/8/8/3P1P2/5P2/K7 b - - 0 1"]
[PlyCount "21"]

1. ... Kb7′ 2. f4′ Kc6′ 3. Kb2 Kd5′ 4. ′Kc3 e5′′′ 5. fxe5′′ Kxe5′′′ {**5m, KPPKP**} 6. Kd2′ Kf4′ 7. Ke2′ e5′ 8. f3′ Kf5′ 9. Ke3′ Kf6′′′ 10. f4′ Kf5′ 11. fxe5′′ Kxe5′′′ (**3m, KPK**} 12. d4′′ Kd5′ 13. Kd3′ Kd6′ ½-½

[Event "TS2.09, 8m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KP(3)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "k7/8/1p6/p1p5/2P4K/8/PP6/8 b - - 0 1"]
[PlyCount "30"]

1. ... a4′′′ 2. Kg4 b5 3. cxb5′′ {**8m, KP(3)KPPB}** Kb7′ 4. Kf4 Kb6′′ 5. Ke4 Kxb5′′ 6. Kd3 c4+′′ 7. Kc3 a3′′′ 8. b3 cxb3′′′ 9. Kxb3′ Ka5′ 10. Kxa3′′ Kb5′ 11. Kb3′ Ka5′ 12. a4′′ Ka6′ 13. Kb′′4′′′ Kb6′ 14. a5+′′ Ka6′ 15. Ka4′ Ka7′ 16. Kb5′′ Kb7′ 17. a6+′′ Ka7′ 18. Ka5′ Kb8′ 19. Kb6′ Ka8′′′ ½-½

[Event "TS2.10, 7m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/8/p7/8/1P6/7p/P4k1P/3K4 b - - 0 1"]
[PlyCount "22"]

1. ... Kg2′ 2. Ke1′ Kxh2′′′ {**6m, KPPKPP**} 3. Kf1′ Kg3′′′ 4. Kg1′′′ h2+′′ 5. Kh1′′′ Kf3′ 6. a4′ Kf4′ 7. b5′ axb5′′′ 8. axb5′ {**4m, KPKP**} Ke5′′′ 9. b6′′ Kd6′′′ 10. b7′′ Kc7′′′ 11. b8=Q+′′ {**4m, KQKP**} Kxb8′′′ 12. Kxh2′′ ½-½

[Event "TS2.11, 7m, ostm"]
[Date "2015.06.22"]
[White "KP(3)"]
[Black "KPP"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p1p/8/6k1/8/6P1/5PP1/7K b - - 0 1"]
[PlyCount "31"]

1. ... h5′′ 2. f4+ Kg4 3. Kh2′′′ f5 4. Kg1 Kxg3′′′ {**6m, KPPKPP**} 5. Kf1′ Kxf4′′ {**5m, KPKPP**} 6. Kf2 h4′′ 7. Kg1′ Kg3 8. Kf1′′′ f4′ 9. Kg1′′′ h3′ 10. gxh3′′′ Kxh3′′ 11. Kf2′′′ Kg4 12. Kg2′′′ f3+′′ 13. Kf2′ Kf4′ 14. Kf1′′′ Ke3 15. Ke1′′′ f2+′′ 16. Kf1′′′ Kf3′ ½-½

[Event "TS2.12, 11m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(4)"]
[Result "*"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "3k4/3p4/3p4/p2P2p1/P2P2P1/3P4/3K4/8 b - - 0 1"]
[PlyCount "0"]

1. ... Ke7′ 2. Kc3′′ Kd8′ 3. Kc4′′ Kc7′ 4. Kb5′′ Kb8′ 5. Kxa5′′ Kb7′′ 6. Kb4′ Ka6′ 7. Kc3′′ Ka5′ 8. Kd2′′ Kxa4′ 9. Ke3′′ Kb5′ 10. Ke4′′ Kb6′ 11. Kf5′′ Kc7′ 12. Kxg5′′ Kc8′′ 13. Kf6′ Kd8′′ 14. Kf7′′ Kc7′ 15. g5′′ Kd8′ 16. g6′′ Kc7′ 17. g7′′ Kd8′ 18. g8=Q+′′ Kc7° 19. Ke7′′ Kb6′ 20. Qb8+′′ Ka5′ 21. Qb3′′ Ka6° 22. Kxd7′′ Ka5′ 23. Kc6′′ Ka6° 24. Qa2#′′ 1-0

[Event "TS2.13, 14m, ostm"]
[Date "2015.06.22"]
[White "KP(6)"]
[Black "KP(6)"]
[Result "0-1"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/7p/2k1Pp2/pp1p2p1/3P2P1/4P3/P3K2P/8 b - - 0 1"]
[PlyCount "43"]

1. ... Kd6 2. e7 Kxe7 {**13m, KP(4)KP(6)**} 3. e4 Ke6 4. Kd3 (4. Kf3 b4 5. h4 dxe4+ 6. Kxe4 gxh4 7. Kf3 a4 8. Ke4 h3 9. d5+ Kd6 10. Kf5 h2 11. Kxf6 b3 12. axb3 h1=Q 13. b4 Qh6+ 14. Kf7 a3 15. Ke8 Qg7 16. g5 Qe7#) 4... b4 5. exd5+ Kxd5 {**11m, KP(4)KP(5)**} 6. Kc2 a4 7. a3 bxa3 {**10m, KP(3)KP(5)**} 8. Kb1 Kxd4 {**9m, KP(2)KP(5)**} 9. Ka2 Kc4 10. Kxa3 {**8m, KP(2)KP(4)**} Kb5 11. Kb2 Kb4 12. Kc1 Kc3 13. Kd1 a3 14. Ke2 a2 15. h3 a1=Q 16. h4 Qb2+ 17. Ke3 Qd2+ 18. Kf3 gxh4 {**7m, KPKQP(3)**} 19. g5″ Kd3″ 20. gxf6″ h5′ 21. f7° Qh2″ 22. f8=Q′ Qg3#″ **0-1**

[Event "TS2.14, 15m, ostm"]
[Date "2015.06.22"]
[White "KP(7)"]
[Black "KP(6)"]
[Result "1-0"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/5p2/2kp1p1p/p1p2P2/2P5/7P/PP3PP1/6K1 b - - 0 1"]
[PlyCount "54"]

1. ... d5 2. cxd5+ Kxd5 {**13m, KP(6)KP(5)**} 3. Kf1″ Ke4 4. Ke2 Kxf5 {**12m, KP(5)KP(5)**} 5. Kd3 Ke5 6. Kc4″ Ke4 7. a4 h5 8. Kxc5″ {**11m, KP(5)KP(4)**} f5 9. Kb5 Kd3 10. Kxa5 {**10m, KP(5)KP(3)**} Ke2 11. Kb4 Kxf2 {**9m, KP(4)KP(3)**} 12. a5″ Kxg2 {**8m, KP(3)KP(3)**} 13. a6″ f4 14. a7″ f3 15. a8=Q″ f5 16. Kc3 Kg3 17. Qd5 f2 18. Qh1″ Kf4″ 19. Kd4 Kg3 20. Ke5 f4 21. Kf5 f3 22. Qf1 Kh2 23. Qxf2+ {**7m, KPPKQPP**} Kh1″ 24. Qxf3+″ {**6m, KQPPKP**} Kg1′ 25. Qe2′ Kh1″ 26. Kf4′ Kg1″ 27. Kf3″ Kh1″ 28. Qg2#″ **1-0**

[Event "TS2.15, 12m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/1p3k2/p4ppp/3P4/1P6/4K2P/1P4P1/8 b - - 0 1"]
[PlyCount "23"]

1. ... h5 2. h4 b6 3. b3 a5 4. bxa5 bxa5‴′ {**10m, KP(4)KP(4)**} 5. Kd4 Ke7 6. Ke4 Kd6 7. Kd4‴′ g5 8. hxg5‴′ fxg5‴′ {**8m, KP(3)KP(3)**} 9. Ke4‴′ g4‴′ 10. g3‴′ Kc7 11. Kf4 Kd6‴′ 12. Kg5 Kxd5‴′ {**7m, KPPKP(3)**, ==} **½-½**

[Event "TS2.16, 12m, ostm"]
[Date "2015.06.22"]
[White "KP(5)"]
[Black "KP(5)"]
[Result "½-½"]
[Annotator "Haworth, Guy"]
[SetUp "1"]
[FEN "8/4pk2/1p4p1/1P2p3/3pP2P/3K2P1/4P3/8 b - - 0 1"]
[PlyCount "13"]

1. ... g5 2. hxg5 {**11m, KP(5)KP(4)**} Kg6 3. e3 dxe3 4. Kxe3 Kxg5 {**8m, KP(3)KP(3)**} 5. Kf3 e6 6. g4 Kh4‴ 7. g5‴ Kxg5″ {**7m, KPPKP(3)**, ==} ½-½