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SHADOWPROVER> (pprint (prove '(((Common now (not (knows a1 now (Marked a1))))
                    (Common now (implies (not (Marked a2))
(Marked a1)))
                    (Common now (implies (not (Marked a1))
(Marked a2)))
                    (Common now (implies (not (Marked a2))
(Knows a1 now (not (Marked a2))))))
                    '(Marked a2))))

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(DSEQ
(HANDLE-DR3
  ((COMMON NOW
    (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))))
  (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))))
(DR2
  ((COMMON NOW
    (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))
    A1)
  (KNOWS A1 NOW
    (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))))
(DR2 ((COMMON NOW (IMPLIES (NOT (MARKED A2)) (MARKED A1))) A1)
  (KNOWS A1 NOW (IMPLIES (NOT (MARKED A2)) (MARKED A1))))
(HANDLE-DR3 ((COMMON NOW (NOT (KNOWS A1 NOW (MARKED A1))))
  (NOT (KNOWS A1 NOW (MARKED A1))))
((SUPPOSE-ABSURD (NOT (MARKED A2)) IN
  (DSEQ
    (IMPLIES-ELIM
      ((IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))
      (NOT (MARKED A2)))
      (KNOWS A1 NOW (NOT (MARKED A2))))
    (HANDLE-DR6
      ((KNOWS A1 NOW (IMPLIES (NOT (MARKED A2)) (MARKED A1)))
      (KNOWS A1 NOW (NOT (MARKED A2))))
      (KNOWS A1 NOW (MARKED A1)))
      (FOL ((KNOWS A1 NOW (MARKED A1)) (NOT (KNOWS A1 NOW (MARKED A1))))
      (AND P (NOT P))))))
  ((KNOWS A1 NOW (MARKED A1)) (NOT (KNOWS A1 NOW (MARKED A1)))
  (KNOWS A1 NOW (IMPLIES (NOT (MARKED A2)) (MARKED A1)))
  (KNOWS A1 NOW (KNOWS A1 NOW (NOT (MARKED A2))))
  (KNOWS A1 NOW
    (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))
  (KNOWS A1 NOW (NOT (MARKED A2)))
  (IMPLIES (NOT (MARKED A2)) (KNOWS A1 NOW (NOT (MARKED A2))))
  (NOT (MARKED A2)))
  (MARKED A2)))

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