**Tema LC**

Problema 9.1.23.7:

Demonstrati incosistenta urmatoarelor multimi de clauze folosind rezolutia blocarii. Alegeti doua indexari diferite pentru literalii din clauze:

S = { p ˅ ¬q, ¬p ˅ ¬q ˅ r, ¬p ˅ ¬q ˅¬ r, r ˅ q, ¬ r ˅ q }

Incercarea 1:

C1 = (4)p ˅ (2)¬q = (2)¬q ˅ (4)p

C2 = (8) ¬p ˅ (1)¬q ˅ (9)r= (1)¬q ˅ (8)¬p ˅ (9)r

C3 = (7)¬p ˅ (12)¬q ˅(11)¬ r=  (7)¬p ˅ (11)¬ r˅ (12)¬q

C4 = (6)r ˅ (10)q= (6)r ˅ (10)q

C5 = (5)¬ r ˅ (3)q= (3)q˅ (5)¬ r

C6 = Resqlock(C5,C1) = (4)p˅ (5)¬ r

C7 = Resplock (C5,C2) = (5) ¬ r ˅ (8) ¬p˅ (9) r

C8 = Resplock (C6,C3) = (5) ¬ r ˅ (12)¬q

C9 = Resrlock (C7,C4) = (8) ¬p˅ (9) r ˅ (10) q

C10 = Resrlock(C8,C4) = q(10) ˅ ¬q(12)

C11 = Resplock(C9,C6) = (5) ¬ r ˅ (8)¬p ˅ (9)r

C12 = Resqlock(C10,C1) = (4) p ˅ (12)¬q

C13 = Resqlock(C10,C2) = (8)¬p ˅ (9)r ˅ (12)¬q

~~C14 = Res~~~~r~~~~lock~~~~(C11,C4) =~~ ~~(8)~~~~¬p ˅~~ ~~(9)~~~~r~~~~˅~~ ~~(10)~~~~q~~ (se repeta cu C9)

~~C15 = Res~~~~p~~~~lock~~~~(C12,C3) =~~ ~~(11)~~~~¬ r~~~~˅~~ ~~(12)~~~~¬q~~ (se aseamana cu C8)

C16 = Resplock(C12,C9) = (9)r ˅ (10)q ˅ (12)¬q

C17 = Resplock(C13,C6) = (5)¬ r ˅ (9)r ˅ (12)¬q

C18 = Resplock(C13,C12) = (9)r ˅ (12)¬q

C19 = Resrlock(C16,C7) = (8)¬p ˅ (9)r ˅ (10)q ˅ (12)¬q

~~C20 = Res~~~~r~~~~lock~~~~(C16,C8) =~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C10)

C21 = Resrlock(C16,C11) = (8)¬p ˅ (9)r ˅ (10)q ˅ (12)¬q

~~C22 = Res~~~~r~~~~lock~~~~(C17,C4) =~~ ~~(9)~~~~r~~~~˅~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C16)

~~C23 = Res~~~~r~~~~lock~~~~(C17,C16) =~~ ~~(9)~~~~r ˅~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C16)

~~C24 = Res~~~~r~~~~lock~~~~(C18,C7) =~~ ~~(8)~~~~¬p ˅~~ ~~(9)~~~~r~~~~˅~~ ~~(12)~~~~¬q~~ (se repeta cu C13)

C25 = Resrlock(C18,C8) = (12)¬q

~~C26 = Res~~~~r~~~~lock~~~~(C18,C11) =~~ ~~(8)~~~~¬p ˅~~ ~~(9)~~~~r ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C13)

~~C27 = Res~~~~r~~~~lock~~~~(C18,C17) =~~ ~~(9)~~~~r ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C18)

C28 = Resplock(C19,C6) = (5)¬ r ˅ (9)r ˅ (10)q ˅ (12)¬q

~~C28 = Res~~~~p~~~~lock~~~~(C19,C12) =~~ ~~(9)~~~~r ˅~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C16)

~~C29 = Res~~~~p~~~~lock~~~~(C21,C6) =~~ ~~(5)~~~~¬ r ˅~~ ~~(9)~~~~r ˅~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (repeta cu C29)

~~C29 = Res~~~~p~~~~lock~~~~(C21,C12) =~~ ~~(9)~~~~r ˅~~ ~~(10)~~~~q ˅~~ ~~(12)~~~~¬q~~ (se repeta cu C16)

C30 = Resqlock(C25,C5) = (5)¬ r

~~C31 = Res~~~~q~~~~lock~~~~(C25,C10) =~~ ~~(12)~~~~¬q~~ (se repeta cu C25)

C32 = Resrlock(C30,C4) = (10)q

C33 = Resqlock(C32,C25) = □

C33 = clauza vida => S inconsistenta

S = { p ˅ ¬q, ¬p ˅ ¬q ˅ r, ¬p ˅ ¬q ˅¬ r, r ˅ q, ¬ r ˅ q }

Incercarea 2:

C1 = (3)p ˅ (4)¬q = (3)p ˅ (4)¬q

C2 = (5)¬p ˅ (11)¬q ˅ (2)r = (2)r˅ (5)¬p ˅ (11)¬q

C3 = (6)¬p ˅ (12)¬q ˅ (1)¬ r = (1)¬ r˅ (6)¬p ˅ (12)¬q

C4 = (7)r ˅ (8)q = (7) r ˅ (8)q

C5 = (9)¬ r ˅ (10)q = (9)¬ r ˅ (10)q

C6 = Resrlock(C2,C3) = (5)¬p ˅ (11)¬q

C7 = Resplock(C1,C6) = (4)¬q

C8 = Resrlock(C4,C5) = (8)q

C9 = Resqlock(C7,C8) = □

C9 = clauza vida => S inconsistenta