```
Results for CXPASO (in 00:00:00.662):
    NB EV: 4
    AP: AP1
    NB AP: 2
    NB_MAY: -1
    NB_MUST_MINUS: -1
    NB MUST PLUS: -1
    NB MUST SHARP: -1
    NB AS: 3
    NB AS RCHD: 2
    TAU AS: 66.67
    NB AT: 9
    NB_AT_RCHD: 6
    TAU AT: 66.67
    NB_EXPECTED_AS: 3
    NB_EXPECTED_AS_RCHD: 2
    TAU EXPECTED AS: 66.67
    NB EXPECTED AT: 1
    NB EXPECTED AT RCHD: 0
    TAU_EXPECTED_AT: 0.00
    NB CS: 18
    NB CS RCHD: 6
    NB CT: 13
    NB CT RCHD: 6
    RH0 CS: 33.33
    RHO CT: 46.15
    NB TESTS: 1
    NB_STEPS: 6
    TESTS:
       \texttt{c0q1} = \texttt{bat(1)} = 9, \ \texttt{bat(2)} = 9, \ \texttt{bat(3)} = 9, \ \texttt{bat(4)} = 9, \ \texttt{bat(5)} = 9, \ \texttt{bat(6)} = 9, \ \texttt{bat(7)} = 9, \ \texttt{bat(8)} = 9, \ \texttt{h=7}, \ \texttt{sw=1} - [ \ \texttt{Fail} \ ] -> \ \texttt{c1q1} = \ \texttt{bat(1)} = 8, \ \texttt{bat(2)} = 9, \ \texttt{bat(2)} = 9, \ \texttt{bat(2)} = 9, \ \texttt{bat(3)} = 9, \ \texttt{bat(3)} = 9, \ \texttt{bat(4)} = 9, \ \texttt{bat(4)
 c0q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=7, sw=1 -[ Fail ]-> c1q1 = bat(1)=8, bat(2)=9, bat(3)=9, bat(4)=9, bat(7)=9, bat(8)=9, h=7, sw=7 c1q1 = bat(1)=8, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=7, sw=7 -[ Repair ]-> c2q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=7, sw=7 -[ Tic ]-> c3q2 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=7, sw=7 -[ Tic ]-> c3q2 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Fail ]-> c5q2 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Repair ]-> c5q2 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(6)=8, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Repair ]-> c3q2 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=6, sw=7 -[ Commute ]-> c4q1 = bat(1)=9, bat(2)=9, bat(3)=9, bat(3)=9, bat(3)=9, bat(3)=9, bat(4)=9, bat(5)=9, bat(6)=9, bat(7)=9, bat(8)=9, h=7, sw=3
    SET_EXPECTED_AS:
     \begin{array}{l} \exists i \in \mathbb{R} \\ \exists (i,j).(and(and(i \in [1..n], j \in [1..n]), \ and(i \neq j, \ bat(i)=ok[9], \ bat(j)=ok[9], \ h=tic[6])))), \ \neg(p1=h=tac[7]) \\ q1=\neg(p0=\exists (i,j).(and(and(i \in [1..n], j \in [1..n]), \ and(i \neq j, \ bat(i)=ok[9], \ bat(j)=ok[9], \ h=tic[6])))), \ \neg(p1=h=tac[7]) \\ q2=(p0=\exists (i,j).(and(and(i \in [1..n], j \in [1..n]), \ and(i \neq j, \ bat(i)=ok[9], \ bat(j)=ok[9], \ h=tic[6])))), \ \neg(p1=h=tac[7]) \\ \end{array} 
     \begin{array}{l} \mathsf{SET\_RCHD\_AS:} \\ \mathsf{q1} = \neg(\mathsf{p0} = \exists (\mathsf{i},\ \mathsf{j}).(\mathsf{and}(\mathsf{and}(\mathsf{i} \in [1..n],\ \mathsf{j} \in [1..n]),\ \mathsf{and}(\mathsf{i} \neq \mathsf{j},\ \mathsf{bat}(\mathsf{i}) = \mathsf{ok}[9],\ \mathsf{bat}(\mathsf{j}) = \mathsf{ok}[9],\ \mathsf{h} = \mathsf{tic}[6])))),\ (\mathsf{p1} = \mathsf{h} = \mathsf{tac}[7]) \\ \mathsf{q2} = (\mathsf{p0} = \exists (\mathsf{i},\ \mathsf{j}).(\mathsf{and}(\mathsf{and}(\mathsf{i} \in [1..n],\ \mathsf{j} \in [1..n]),\ \mathsf{and}(\mathsf{i} \neq \mathsf{j},\ \mathsf{bat}(\mathsf{i}) = \mathsf{ok}[9],\ \mathsf{bat}(\mathsf{j}) = \mathsf{ok}[9],\ \mathsf{h} = \mathsf{tic}[6])))),\ \neg(\mathsf{p1} = \mathsf{h} = \mathsf{tac}[7]) \\ \end{array} 
     \begin{split} & \mathsf{SET}\_\mathsf{RCHD}\_\mathsf{EXPECTED}\_\mathsf{AS}: \\ & \mathsf{q1} = \neg(\mathsf{p0} = \exists (\mathsf{i},\ \mathsf{j}).(\mathsf{and}(\mathsf{and}(\mathsf{i} \in [1..n],\ \mathsf{j} \in [1..n]),\ \mathsf{and}(\mathsf{i} \neq \mathsf{j},\ \mathsf{bat}(\mathsf{i}) = \mathsf{ok}[9],\ \mathsf{bat}(\mathsf{j}) = \mathsf{ok}[9],\ \mathsf{h} = \mathsf{tic}[6])))),\ (\mathsf{p1} = \mathsf{h} = \mathsf{tac}[7]) \\ & \mathsf{q2} = (\mathsf{p0} = \exists (\mathsf{i},\ \mathsf{j}).(\mathsf{and}(\mathsf{and}(\mathsf{i} \in [1..n],\ \mathsf{j} \in [1..n]),\ \mathsf{and}(\mathsf{i} \neq \mathsf{j},\ \mathsf{bat}(\mathsf{i}) = \mathsf{ok}[9],\ \mathsf{bat}(\mathsf{j}) = \mathsf{ok}[9],\ \mathsf{h} = \mathsf{tic}[6])))),\ \neg(\mathsf{p1} = \mathsf{h} = \mathsf{tac}[7]) \end{split} 
    SET EXPECTED AT:
     \begin{array}{l} q1 = \neg(p0 = \overline{\exists}(i, j).(and(and(i \in [1..n], j \in [1..n]), \ and(i \neq j, \ bat(i) = ok[9], \ bat(j) = ok[9], \ h = tic[6])))), \ (p1 = h = tac[7]) \ -[ \ Tic \ ] -> \ q0 = \neg(p0 = \overline{\exists}(i, j).(and(and(i \in [1..n], j \in [1..n]), \ and(i \neq j, \ bat(i) = ok[9], \ bat(j) = ok[9], \ h = tic[6])))), \ \neg(p1 = h = tac[7]) \end{array} 
 \begin{aligned} & \text{SET\_RCHD\_AT:} \\ & \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{ and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{bat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ (\text{p1} = \text{h=tac}[7]) - [\text{ Fail }] -> \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{bat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ (\text{p1} = \text{h=tac}[7]) - [\text{ Repair }] -> \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{bat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ (\text{p1} = \text{h=tac}[7]) - [\text{ Repair }] -> \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{bat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ (\text{p1} = \text{h=tac}[7]) - [\text{ Tic }] -> \text{q2} = (p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Tic }] -> \text{q2} = (p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{hat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Commute }] -> \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{hat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Commute }] -> \text{q1} = \neg(p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{hat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Commute }] -> \text{q2} = (p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{hat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Repair }] -> \text{q2} = (p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i} \in [1..n], \text{j} \in [1..n]), \text{and}(\text{i} \neq \text{j, bat}(\text{i}) = \text{ok}[9], \text{hat}(\text{j}) = \text{ok}[9], \text{h=tic}[6])))), \ \neg(\text{p1} = \text{h=tac}[7]) - [\text{ Repair }] -> \text{q2} = (p0 = \exists (\text{i, j}).(\text{and}(\text{and}(\text{i}
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SET_UNRCHD_AS: q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6]))), ¬(p1 = h=tac[7]) SET_UNRCHD_EXPECTED_AS: q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6]))), ¬(p1 = h=tac[7]) SET_UNRCHD_AT: q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6]))), ¬(p1 = h=tac[7]) -[Repair]-> q2 = (p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Fail]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Fail]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬(p1 = h=tac[7]) -[Tic]-> q0 = ¬(p0 = ∃(i, j).(and(and(i ∈ [1..n], j ∈ [1..n]), and(i ≠ j, bat(i)=ok[9], bat(j)=ok[9], h=tic[6])))), ¬

SET_RCHD_EXPECTED_AT:

TIME_TESTS: 00:00:00.000