Software for Evaluating Relevance of Steps in Algebraic Transformations

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1: Stage 1:»
Rule applied: 15: biconditional eliminated - OK
\[(A \land \neg C \land B) v C \Rightarrow C\]
\[(A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C \Rightarrow C\]
\[\neg ((A \land \neg C \land B) \land (A \land \neg C \land B)) v C \Rightarrow C\]
\[(A \land \neg C \land B) v (\neg A \land \neg B) v C \Rightarrow C\]
\[(A \land \neg C \land B) v (\neg A \land \neg B) v C \Rightarrow C\]

2: Stage 1:»
Rule applied: 4: Negation into & or v
First eliminate bicond-s and impl-s!
\[(A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C \Rightarrow C\]
\[(A \land \neg C \land B) v (\neg A \land \neg B) v C \Rightarrow C\]

3: Stage 1:»
Rule applied: 2: Cancel double negation - OK
\[(A \land \neg C \land B) v (\neg A \land \neg B) v C \Rightarrow C\]
\[(A \land \neg C \land B) v (\neg A \land \neg B) v C \Rightarrow C\]

4: Stage 1:»
Rule applied: 13: impl eliminated - OK
\[(A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C \Rightarrow C\]
\[-((A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C) v C\]

5: Stage 2: ¬(}
Rule applied: 21: multiplication of disj-s
Stage 2 not yet finished (negations into brackets)!
\[-((A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C) v C\]
\[-((A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C) v C\]

6: Stage 2: ¬(}
Rule applied: 19: adding variables by rule X→X\&Y→X\&7Y
This conversion belongs to stage 5!
\[-((A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C) v C\]
\[-((A \land \neg C \land B) v (\neg (A \land \neg C) \land B) v C) v C\]