A triple in \( ABC \) is exactly 1 of \( A, B, C \) have value 1.

\( (1,1,0) \) is in \( ABC \)
\( (1,1,1) \) is out of \( ABC \)

\( F_A B C \)

\( 111 \)
\( 100 \)
\( 010 \)
\( 001 \)

\( A, B, C \) are Boolean variables.

This mapping \{01, 10, 00\} in \( ABC \) which requires \{10, 11, 01\} in \( F_A B C \), which

\( (1,1,0) \)
\( (1,0,1) \)
\( (0,1,1) \)
\( (0,1,0) \)
\( (1,0,0) \)

Review Session 580-2008-12-04
(Existence of Left-identity or Right-inverse of Left-inverse)

or:

\[ \exists x \in X \forall y \in Y : x \circ y = x \]

Let:

\[ f : X \times Y \to p(x, y) \]

(fory sake)

\[ \forall y \in Y : x \circ y = x \]

\[ f(x, y) = x \]

(Converse order)

\[ \forall x \in X \forall y \in Y : x \circ y = x \]

\[ f(x, y) = x \]

(opposite)

\[ \exists y \in Y : x \circ y = x \]

\[ f(x, y) = x \]

(Examples of Correspondence)

\[ p(x', y', z') \in \] Group axioms
Show the exact form of right-inverse.

Resolution

We show the correspondence by

\[ (1) \lor (2) \lor (3) \lor (4) \text{ is unsatisfiable} \]

\[ \iff \]

\[ (1) \lor (2) \lor (3) \lor (4) \]

\[ \iff \]

\[ (1) \lor (2) \lor (3) \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]

\[ \lor (4) \]
We should therefore expect our proof to work out.
\{ \langle \phi(\alpha), \epsilon \rangle \mid \phi \in \phi(\alpha), \epsilon \in \epsilon \} \\
\leq \left( \left\{ \langle \phi(\alpha), \epsilon \rangle \mid \phi \in \phi(\alpha), \epsilon \in \epsilon \right\} \right)
\left\{ \langle \phi(\alpha), \epsilon \rangle \mid \phi \in \phi(\alpha), \epsilon \in \epsilon \right\} \}
(c) If $A$ is a diagonal, it is the clique of odd length and

$$\forall d \in D, \exists f : f(d) = e \in E$$

(5) A diagonal is happy if all of its children are.

Another exercise with resolution refutation:
(a) \forall d \left( \exists x \text{ Ch}(x, d) \land \neg F(x) \right) \lor H(d)

(\forall d \left[ \text{Ch} \left( \text{Child}(d), d \right) \land \neg F(\text{Child}(d)) \right] \lor H(d)\right)

(c)

\neg \text{Gr}(d) \lor F(d)

in implicative form, a horn clause: \text{green} (D_1), \neg \text{green} (D_2), \text{Ch} (d_1, d_2) \lor