

$$t \leftrightarrow \langle xyz \rangle \Leftrightarrow \neg((x \wedge y) \vee (y \wedge z) \vee (x \wedge z)) \vee t$$

$$\Leftrightarrow (\bar{x} \vee \bar{y}) \wedge (\bar{y} \vee \bar{z}) \wedge (\bar{x} \vee \bar{z}) \vee t$$

Introduce a new variable for each subformula:

$$a_1 \leftrightarrow (\bar{x} \vee \bar{y})$$

$$a_2 \leftrightarrow (\bar{y} \vee \bar{z})$$

$$a_3 \leftrightarrow (\bar{x} \vee \bar{z})$$

$$a_4 \leftrightarrow \text{~~xxxx~~} a_1 \wedge a_2$$

$$a_5 \leftrightarrow a_1 \wedge a_2 \wedge a_3$$

$$\leftrightarrow a_4 \wedge a_3$$

$$a_6 \leftrightarrow a_5 \vee t$$

Conjunct all substitutions and the substitution for t

$$\Leftrightarrow a_6 \wedge (a_6 \leftrightarrow a_5 \vee t) \wedge (a_5 \leftrightarrow a_4 \wedge a_3) \wedge (a_4 \leftrightarrow a_1 \wedge a_2) \wedge (a_3 \leftrightarrow \bar{x} \vee \bar{z})$$

$$\wedge (a_2 \leftrightarrow \bar{y} \vee \bar{z}) \wedge (a_1 \leftrightarrow \bar{x} \vee \bar{y})$$

Transform all the substitutions into CNF

$$\Leftrightarrow a_6 \wedge (\bar{a}_6 \vee a_5 \vee t) \wedge (a_6 \vee \bar{a}_5) \wedge (a_6 \vee \bar{t}) \wedge$$

$$\text{~~xx~~} (\bar{a}_5 \vee a_4) \wedge (\bar{a}_5 \vee a_3) \wedge (a_5 \vee \bar{a}_3 \vee \bar{a}_4) \wedge$$

$$(\bar{a}_4 \vee a_1) \wedge (\bar{a}_4 \vee a_2) \wedge (a_4 \vee \bar{a}_1 \vee \bar{a}_2) \wedge$$

$$(\bar{a}_3 \vee \bar{x} \vee \bar{z}) \wedge (a_3 \vee x) \wedge (a_3 \vee z) \wedge$$

$$(\bar{a}_2 \vee \bar{y} \vee \bar{z}) \wedge (a_2 \vee y) \wedge (a_2 \vee z) \wedge$$

$$(\bar{a}_1 \vee \bar{x} \vee \bar{y}) \wedge (a_1 \vee x) \wedge (a_1 \vee y)$$