

t8_twoscomp
(TMTSL1GjFfTCSU6yuPBLbbqkBY23UwvQENu)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_twoscomp : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_twoscomp : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_finseq_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (k9_margrel1 X0 = k3_xboolean X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k2_binarith X0 X1 = k10_xboolean X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (k3_xboolean (k3_xboolean X0) = X0) \quad (3)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (m1_subset_1 (k9_margrel1 X0) k6_margrel1) \quad (4)$$

Assume the following.

$$(v1_funct_1 k16_twoscomp) \wedge ((v1_funct_2 k16_twoscomp (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 k16_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \quad (5)$$

Assume the following.

$$(v1_funct_1\ k14_twoscomp) \wedge ((v1_funct_2\ k14_twoscomp\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ k14_twoscomp\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k7_xboolean\ X0\ X1 = k4_xboolean\ (k6_xboolean\ X0\ X1)\ (k6_xboolean\ X1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k6_xboolean\ X0\ X1 = k5_xboolean\ (k3_xboolean\ X0\ X1))) \quad (8)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))))) \Rightarrow ((X0 = k16_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1\ X1\ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k6_margrel1) \Rightarrow (k1_funct_1\ X0\ (k10_finseq_1\ X1\ X2) = k2_binarith\ (k9_margrel1\ X1)\ (k9_margrel1\ X2)))))) \quad (9)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))))) \Rightarrow ((X0 = k14_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1\ X1\ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k6_margrel1) \Rightarrow (k1_funct_1\ X0\ (k10_finseq_1\ X1\ X2) = k2_binarith\ X1\ X2)))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k10_xboolean\ X0\ X1 = k3_xboolean\ (k7_xboolean\ X0\ X1))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k7_xboolean\ X0\ X1 = k7_xboolean\ X1\ X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean\ X0) \wedge (v1_xboolean\ X1)) \Rightarrow (k5_xboolean\ X0\ X1 = k5_xboolean\ X1\ X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k6_margrel1) \Rightarrow (v1_xboolean\ X0) \quad (14)$$

Theorem 1

$$\begin{aligned} \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 k6_margrel1) \Rightarrow (k1_funct_1 k16_twoscomp (k10_finseq_1 X0 X1) = \\ k1_funct_1 k14_twoscomp (k10_finseq_1 X0 X1))) \end{aligned}$$