

t9_twoscomp (TM- Luz66vLpvwyiNGVTKm3vqBXh3xD9NVwsh)

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Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_twoscomp : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k3_twoscomp : \iota$ be given. Let $k4_twoscomp : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $np_0 : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k8_margrel1 : \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $k10_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{1}$$

Assume the following.

$$v1_xboole_0 np_0 \tag{2}$$

Assume the following.

$$k3_xcmplx_0 np_1 np_0 = np_0 \tag{3}$$

Assume the following.

$$k3_xcmplx_0 np_0 np_1 = np_0 \tag{4}$$

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \tag{5}$$

Assume the following.

$$k6_xcmplx_0 np_1 np_0 = np_1 \tag{6}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (k9_margrel1 X0 = k3_xboolean X0) \quad (7)$$

Assume the following.

$$k8_margrel1 = k2_xboolean \quad (8)$$

Assume the following.

$$k7_margrel1 = k1_xboolean \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k10_margrel1 X0 X1 = k4_xboolean X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k10_margrel1 X0 X0 = X0) \quad (12)$$

Assume the following.

$$v1_xboolean k2_xboolean \quad (13)$$

Assume the following.

$$v1_xboolean k1_xboolean \quad (14)$$

Assume the following.

$$m1_subset_1 k8_margrel1 k6_margrel1 \quad (15)$$

Assume the following.

$$m1_subset_1 k7_margrel1 k6_margrel1 \quad (16)$$

Assume the following.

$$(v1_funct_1 k4_twoscomp) \wedge ((v1_funct_2 k4_twoscomp (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 k4_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \quad (17)$$

Assume the following.

$$(v1_funct_1 k3_twoscomp) \wedge ((v1_funct_2 k3_twoscomp (k4_finseq_2 np_2 k6_margrel1) k6_margrel1) \wedge (m1_subset_1 k3_twoscomp (k1_zfmisc_1 (k2_zfmisc_1 (k4_finseq_2 np_2 k6_margrel1) k6_margrel1)))) \quad (18)$$

Assume the following.

$$(v1_funct_1\ k2_twoscomp) \wedge ((v1_funct_2\ k2_twoscomp\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ k2_twoscomp\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (\forall X1.(v1_xboolean\ X1) \Rightarrow (k4_xboolean\ X0\ X1 = k3_xcmplx_0\ X0\ X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboolean\ X0) \Rightarrow (k3_xboolean\ X0 = k6_xcmplx_0\ np_1\ X0) \quad (21)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))))) \Rightarrow ((X0 = k4_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1\ X1\ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k6_margrel1) \Rightarrow (k1_funct_1\ X0\ (k10_finseq_1\ X1\ X2) = k10_margrel1\ (k9_margrel1\ X1)\ (k9_margrel1\ X2)))))) \quad (22)$$

Assume the following.

$$k2_xboolean = np_1 \quad (23)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))))) \Rightarrow ((X0 = k3_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1\ X1\ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k6_margrel1) \Rightarrow (k1_funct_1\ X0\ (k10_finseq_1\ X1\ X2) = k10_margrel1\ (k9_margrel1\ X1)\ X2)))) \quad (24)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (25)$$

Assume the following.

$$\forall X0.((v1_funct_1\ X0) \wedge ((v1_funct_2\ X0\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1) \wedge (m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1\ (k4_finseq_2\ np_2\ k6_margrel1)\ k6_margrel1)))))) \Rightarrow ((X0 = k2_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1\ X1\ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1\ X2\ k6_margrel1) \Rightarrow (k1_funct_1\ X0\ (k10_finseq_1\ X1\ X2) = k10_margrel1\ X1\ X2)))) \quad (26)$$

Theorem 1

$$\begin{aligned} & (k1_funct_1\ k2_twoscomp\ (k10_finseq_1\ k6_numbers\ k6_numbers) = \\ & k6_numbers) \wedge ((k1_funct_1\ k2_twoscomp\ (k10_finseq_1\ k6_numbers \\ & np_1) = k6_numbers) \wedge ((k1_funct_1\ k2_twoscomp\ (k10_finseq_1 \\ np_1\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k2_twoscomp\ (k10_finseq_1 \\ & np_1\ np_1) = np_1) \wedge ((k1_funct_1\ k3_twoscomp\ (k10_finseq_1 \\ & k6_numbers\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k3_twoscomp \\ & (k10_finseq_1\ k6_numbers\ np_1) = np_1) \wedge ((k1_funct_1\ k3_twoscomp \\ & (k10_finseq_1\ np_1\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k3_twoscomp \\ & (k10_finseq_1\ np_1\ np_1) = k6_numbers) \wedge ((k1_funct_1\ k4_twoscomp \\ & (k10_finseq_1\ k6_numbers\ k6_numbers) = np_1) \wedge ((k1_funct_1\ k4_twoscomp \\ & (k10_finseq_1\ k6_numbers\ np_1) = k6_numbers) \wedge ((k1_funct_1\ k4_twoscomp \\ & (k10_finseq_1\ np_1\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k4_twoscomp \\ & (k10_finseq_1\ np_1\ np_1) = k6_numbers)))))))))) \end{aligned}$$