

t10_twoscomp (TMEo149rXQXhPDeW2xv8BFsxysKo8H85DZp)

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Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_twoscomp : \iota$ 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 $k9_twoscomp : \iota$ be given. Let $k10_twoscomp : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k7_twoscomp : \iota$ be given. Let $k6_twoscomp : \iota$ be given. Let $k5_twoscomp : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ 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 $k3_xboolean : \iota \Rightarrow \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $k5_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow ((k1_funct_1 k8_twoscomp (k10_finseq_1 X0 X1) = \\ & k1_funct_1 k7_twoscomp (k10_finseq_1 X0 X1)) \wedge ((k1_funct_1 k9_twoscomp \\ & (k10_finseq_1 X0 X1) = k1_funct_1 k6_twoscomp (k10_finseq_1 X1 \\ & X0)) \wedge (k1_funct_1 k10_twoscomp (k10_finseq_1 X0 X1) = k1_funct_1 \\ & k5_twoscomp (k10_finseq_1 X0 X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow ((k1_funct_1 k8_twoscomp (k10_finseq_1 X0 X1) = \\ & k1_binarith X0 X1) \wedge ((k1_funct_1 k9_twoscomp (k10_finseq_1 X0 \\ & X1) = k1_binarith (k9_margrel1 X0) X1) \wedge (k1_funct_1 k10_twoscomp \\ & (k10_finseq_1 X0 X1) = k1_binarith (k9_margrel1 X0) (k9_margrel1 \\ & X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$v1_xboole_0 \ np_0 \tag{4}$$

Assume the following.

$$k3_xcmplx_0 \ np_0 \ np_1 = np_0 \tag{5}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k6_margrel1) \Rightarrow (k9_margrel1 \ X0 = k3_xboolean \ X0) \tag{7}$$

Assume the following.

$$k7_margrel1 = k1_xboolean \tag{8}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k6_margrel1) \wedge (m1_subset_1 \ X1 \ k6_margrel1)) \Rightarrow (k1_binarith \ X0 \ X1 = k5_xboolean \ X0 \ X1) \tag{10}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (k3_xboolean \ (k3_xboolean \ X0) = X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k6_margrel1) \wedge (m1_subset_1 \ X1 \ k6_margrel1)) \Rightarrow (k10_margrel1 \ X0 \ X0 = X0) \tag{13}$$

Assume the following.

$$v1_xboolean \ k1_xboolean \tag{14}$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k6_margrel1) \Rightarrow (m1_subset_1 \ (k9_margrel1 \ X0) \ k6_margrel1) \tag{15}$$

Assume the following.

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

Assume the following.

$$(v1_funct_1 \ k5_twoscomp) \wedge ((v1_funct_2 \ k5_twoscomp \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ k5_twoscomp \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (v1_xboolean \ (k3_xboolean \ X0)) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k5_xboolean \ X0 \ X1 = k3_xboolean \ (k4_xboolean \ (k3_xboolean \ X0) \ (k3_xboolean \ X1)))) \quad (19)$$

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.

$$\forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1) \wedge (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ (k4_finseq_2 \ np_2 \ k6_margrel1) \ k6_margrel1)))))) \Rightarrow ((X0 = k5_twoscomp) \Leftrightarrow (\forall X1.(m1_subset_1 \ X1 \ k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 \ X2 \ k6_margrel1) \Rightarrow (k1_funct_1 \ X0 \ (k10_finseq_1 \ X1 \ X2) = k9_margrel1 \ (k10_margrel1 \ X1 \ X2)))))) \quad (22)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k6_margrel1) \wedge (m1_subset_1 \ X1 \ k6_margrel1)) \Rightarrow (k1_binarith \ X0 \ X1 = k1_binarith \ X1 \ X0) \quad (24)$$

Theorem 1

$$\begin{aligned} & (k1_funct_1\ k8_twoscomp\ (k10_finseq_1\ k6_numbers\ k6_numbers) = \\ & k6_numbers) \wedge ((k1_funct_1\ k8_twoscomp\ (k10_finseq_1\ k6_numbers \\ & np_1) = np_1) \wedge ((k1_funct_1\ k8_twoscomp\ (k10_finseq_1\ np_1 \\ & k6_numbers) = np_1) \wedge ((k1_funct_1\ k8_twoscomp\ (k10_finseq_1 \\ & np_1\ np_1) = np_1) \wedge ((k1_funct_1\ k9_twoscomp\ (k10_finseq_1 \\ & k6_numbers\ k6_numbers) = np_1) \wedge ((k1_funct_1\ k9_twoscomp\ (k10_finseq_1 \\ & k6_numbers\ np_1) = np_1) \wedge ((k1_funct_1\ k9_twoscomp\ (k10_finseq_1 \\ & np_1\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k9_twoscomp\ (k10_finseq_1 \\ & np_1\ np_1) = np_1) \wedge ((k1_funct_1\ k10_twoscomp\ (k10_finseq_1 \\ & k6_numbers\ k6_numbers) = np_1) \wedge ((k1_funct_1\ k10_twoscomp\ (k10_finseq_1 \\ & k6_numbers\ np_1) = np_1) \wedge ((k1_funct_1\ k10_twoscomp\ (k10_finseq_1 \\ & np_1\ k6_numbers) = np_1) \wedge ((k1_funct_1\ k10_twoscomp\ (k10_finseq_1 \\ & np_1\ np_1) = k6_numbers)))))))))) \end{aligned}$$