

t11_twoscomp

(TMaxcvxnCPdqLi51ENXPnvS9SLTP1BFggrt)

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Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k14_twoscomp : \iota$ 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 $k15_twoscomp : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k2_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k16_twoscomp : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ 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 $k8_margrel1 : \iota$ be given. Let $k2_xboolean : \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $k1_xboolean : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k7_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow ((k1_funct_1 k14_twoscomp (k10_finseq_1 X0 X1) = \\ & k2_binarith X0 X1) \wedge ((k1_funct_1 k15_twoscomp (k10_finseq_1 X0 \\ & X1) = k2_binarith (k9_margrel1 X0) X1) \wedge (k1_funct_1 k16_twoscomp \\ & (k10_finseq_1 X0 X1) = k2_binarith (k9_margrel1 X0) (k9_margrel1 \\ & X1)))))) \end{aligned} \tag{1}$$

Assume the following.

$$v1_xboole_0 np_0 \tag{2}$$

Assume the following.

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

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \tag{4}$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (k9_margrel1 X0 = k3_xboolean X0) \quad (6)$$

Assume the following.

$$k8_margrel1 = k2_xboolean \quad (7)$$

Assume the following.

$$k7_margrel1 = k1_xboolean \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k2_binarith X0 X1 = k10_xboolean X0 X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k1_binarith X0 X1 = k5_xboolean X0 X1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k10_margrel1 X0 X1 = k4_xboolean X0 X1) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k6_margrel1) \wedge (m1_subset_1 X1 k6_margrel1)) \Rightarrow (k10_margrel1 X0 X0 = X0) \quad (14)$$

Assume the following.

$$v1_xboolean k2_xboolean \quad (15)$$

Assume the following.

$$v1_xboolean k1_xboolean \quad (16)$$

Assume the following.

$$m1_subset_1 k8_margrel1 k6_margrel1 \quad (17)$$

Assume the following.

$$m1_subset_1 \ k7_margrel1 \ k6_margrel1 \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k7_xboolean \ X0 \ X1 = k4_xboolean \ (k6_xboolean \ X0 \ X1) \ (k6_xboolean \ X1 \ X0))) \quad (19)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k6_xboolean \ X0 \ X1 = k5_xboolean \ (k3_xboolean \ X0) \ X1)) \quad (20)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k5_xboolean \ X0 \ X1 = k3_xboolean \ (k4_xboolean \ (k3_xboolean \ X0) \ (k3_xboolean \ X1)))) \quad (21)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k4_xboolean \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1)) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (k3_xboolean \ X0 = k6_xcmplx_0 \ np_1 \ X0) \quad (23)$$

Assume the following.

$$k2_xboolean = np_1 \quad (24)$$

Assume the following.

$$k1_xboole_0 = the \ (\lambda X0 : \iota.v1_xboole_0 \ X0) \quad (25)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (26)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (\forall X1.(v1_xboolean \ X1) \Rightarrow (k10_xboolean \ X0 \ X1 = k3_xboolean \ (k7_xboolean \ X0 \ X1))) \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean \ X0) \wedge (v1_xboolean \ X1)) \Rightarrow (k7_xboolean \ X0 \ X1 = k7_xboolean \ X1 \ X0) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean \ X0) \wedge (v1_xboolean \ X1)) \Rightarrow (k5_xboolean \ X0 \ X1 = k5_xboolean \ X1 \ X0) \quad (29)$$

Theorem 1

$$\begin{aligned} & (k1_funct_1\ k14_twoscomp\ (k10_finseq_1\ k6_numbers\ k6_numbers) = \\ & k6_numbers) \wedge ((k1_funct_1\ k14_twoscomp\ (k10_finseq_1\ k6_numbers \\ & \quad np_1) = np_1) \wedge ((k1_funct_1\ k14_twoscomp\ (k10_finseq_1\ np_1 \\ & \quad k6_numbers) = np_1) \wedge ((k1_funct_1\ k14_twoscomp\ (k10_finseq_1 \\ & \quad np_1\ np_1) = k6_numbers) \wedge ((k1_funct_1\ k15_twoscomp\ (k10_finseq_1 \\ & \quad k6_numbers\ k6_numbers) = np_1) \wedge ((k1_funct_1\ k15_twoscomp\ (k10_finseq_1 \\ & \quad k6_numbers\ np_1) = k6_numbers) \wedge ((k1_funct_1\ k15_twoscomp\ (k10_finseq_1 \\ & \quad np_1\ k6_numbers) = k6_numbers) \wedge ((k1_funct_1\ k15_twoscomp\ (k10_finseq_1 \\ & \quad \quad np_1\ np_1) = np_1)))))) \end{aligned}$$