

t25_twoscomp
(TMHQj3dygXRxY17sGv8rwmSbcagzh3vyusc)

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Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k28_twoscomp : \iota$ be given. Let $k11_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k25_twoscomp : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_margrel1 : \iota$ be given. Let $k1_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_twoscomp : \iota$ be given. Let $k9_margrel1 : \iota \Rightarrow \iota$ be given. Let $k27_twoscomp : \iota$ be given. Let $np_0 : \iota$ 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 $v1_xboolean : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & (k1_funct_1 k25_twoscomp (k11_finseq_1 k6_numbers k6_numbers \\ & k6_numbers) = k6_numbers) \wedge ((k1_funct_1 k25_twoscomp (k11_finseq_1 \\ & k6_numbers k6_numbers np_1) = np_1) \wedge ((k1_funct_1 k25_twoscomp \\ & (k11_finseq_1 k6_numbers np_1 k6_numbers) = np_1) \wedge ((k1_funct_1 \\ & k25_twoscomp (k11_finseq_1 k6_numbers np_1 np_1) = np_1) \wedge (\\ & (k1_funct_1 k25_twoscomp (k11_finseq_1 np_1 k6_numbers k6_numbers) = \\ & np_1) \wedge ((k1_funct_1 k25_twoscomp (k11_finseq_1 np_1 k6_numbers \\ & np_1) = np_1) \wedge ((k1_funct_1 k25_twoscomp (k11_finseq_1 np_1 \\ & np_1 k6_numbers) = np_1) \wedge (k1_funct_1 k25_twoscomp (k11_finseq_1 \\ & np_1 np_1 np_1) = np_1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 k6_margrel1) \Rightarrow (\forall X2.(m1_subset_1 X2 k6_margrel1) \Rightarrow ((\\ & k1_funct_1 k25_twoscomp (k11_finseq_1 X0 X1 X2) = k1_binarith (\\ & k1_binarith X0 X1) X2) \wedge ((k1_funct_1 k26_twoscomp (k11_finseq_1 \\ & X0 X1 X2) = k1_binarith (k1_binarith (k9_margrel1 X0) X1) X2) \wedge ((\\ & k1_funct_1 k27_twoscomp (k11_finseq_1 X0 X1 X2) = k1_binarith (\\ & k1_binarith (k9_margrel1 X0) (k9_margrel1 X1)) X2) \wedge (k1_funct_1 \\ & k28_twoscomp (k11_finseq_1 X0 X1 X2) = k1_binarith (k1_binarith \\ & (k9_margrel1 X0) (k9_margrel1 X1)) (k9_margrel1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (4)$$

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \quad (5)$$

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.

$$\forall X0.(m1_subset_1 X0 k6_margrel1) \Rightarrow (k9_margrel1 (k9_margrel1 X0) = X0) \quad (10)$$

Assume the following.

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

Assume the following.

$$v1_xboolean k2_xboolean \quad (12)$$

Assume the following.

$$m1_subset_1 k8_margrel1 k6_margrel1 \quad (13)$$

Assume the following.

$$m1_subset_1 \ k7_margrel1 \ k6_margrel1 \quad (14)$$

Assume the following.

$$\forall X0.(v1_xboolean \ X0) \Rightarrow (k3_xboolean \ X0 = k6_xcmplx_0 \ np_1 \ X0) \quad (15)$$

Assume the following.

$$k2_xboolean = np_1 \quad (16)$$

Assume the following.

$$k1_xboolean = k6_numbers \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k6_margrel1) \wedge (m1_subset_1 \ X1 \ k6_margrel1)) \Rightarrow (k1_binarith \ X0 \ X1 = k1_binarith \ X1 \ X0) \quad (18)$$

Theorem 1

$$\begin{aligned} & (k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \ k6_numbers \ k6_numbers \\ & \quad k6_numbers) = np_1) \wedge ((k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \\ & \quad k6_numbers \ k6_numbers \ np_1) = np_1) \wedge ((k1_funct_1 \ k28_twoscomp \\ & \quad (k11_finseq_1 \ k6_numbers \ np_1 \ k6_numbers) = np_1) \wedge ((k1_funct_1 \\ & \quad \quad k28_twoscomp \ (k11_finseq_1 \ k6_numbers \ np_1 \ np_1) = np_1) \wedge \\ & \quad (k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \ np_1 \ k6_numbers \ k6_numbers) = \\ & \quad \quad np_1) \wedge ((k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \ np_1 \ k6_numbers \\ & \quad \quad np_1) = np_1) \wedge ((k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \ np_1 \\ & \quad \quad np_1 \ k6_numbers) = np_1) \wedge (k1_funct_1 \ k28_twoscomp \ (k11_finseq_1 \\ & \quad \quad \quad np_1 \ np_1 \ np_1) = k6_numbers)))))) \end{aligned}$$