

l145_toprealb

(TMNSU1w66nK67jkMKZWsfEx4Nk5snN8zZAc)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_topalg_2 : \iota$ be given. Let $k5_toprealb : \iota \Rightarrow \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $c33_toprealb : \iota$ be given. Let $c44_toprealb : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $c45_toprealb : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_toprealb : \iota \Rightarrow \iota$ be given. Let $k4_sin_cos6 : \iota$ be given. Let $v5_pre_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski \\ & (k10_xtuple_0 X1) X0) \Rightarrow ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k9_xtuple_0 \\ & X1) X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (k9_xtuple_0 \\ & X1) X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v5_relat_1 X1 X0)) \Rightarrow (k2_relset_1 X0 X1 = k10_xtuple_0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \tag{3}$$

Assume the following.

$$\begin{aligned}
& r1_tarSKI (k2_relset_1 (u1_struct_0 (k1_pre_topc k2_topalg_2 \\
& (k5_toprealb (k1_rcomp_1 k6_numbers k32_sin_cos)))) (k2_partfun1 \\
& (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 \\
& (k1_real_1 np_1) np_1)))) (u1_struct_0 (k1_pre_topc k2_topalg_2 \\
& (k5_toprealb (k1_rcomp_1 k6_numbers k32_sin_cos)))) c33_toprealb \\
& (k5_toprealb c44_toprealb))) c45_toprealb
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& k1_relset_1 (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb \\
& (k1_rcomp_1 (k1_real_1 np_1) np_1)))) (k2_partfun1 (u1_struct_0 \\
& (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 (k1_real_1 \\
& np_1) np_1)))) (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb \\
& (k1_rcomp_1 k6_numbers k32_sin_cos)))) c33_toprealb (k5_toprealb \\
& c44_toprealb)) = c44_toprealb
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb c45_toprealb)) = \\
& k5_toprealb c45_toprealb
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb c44_toprealb)) = \\
& k5_toprealb c44_toprealb
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 \\
& k6_numbers k32_sin_cos))) = k1_rcomp_1 k6_numbers k32_sin_cos
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 \\
& (k1_real_1 np_1) np_1))) = k1_rcomp_1 (k1_real_1 np_1) np_1
\end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned}
& (v1_funct_1 (k6_toprealb k4_sin_cos6)) \wedge ((v1_funct_2 (k6_toprealb \\
& k4_sin_cos6) (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb \\
& (k1_rcomp_1 (k1_real_1 np_1) np_1)))) (u1_struct_0 (k1_pre_topc \\
& k2_topalg_2 (k5_toprealb (k1_rcomp_1 k6_numbers k32_sin_cos)))))) \wedge \\
& ((v5_pre_topc (k6_toprealb k4_sin_cos6) (k1_pre_topc k2_topalg_2 \\
& (k5_toprealb (k1_rcomp_1 (k1_real_1 np_1) np_1))) (k1_pre_topc \\
& k2_topalg_2 (k5_toprealb (k1_rcomp_1 k6_numbers k32_sin_cos)))))) \wedge \\
& (m1_subset_1 (k6_toprealb k4_sin_cos6) (k1_zfmisc_1 (k2_zfmisc_1 \\
& (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 \\
& (k1_real_1 np_1) np_1)))) (u1_struct_0 (k1_pre_topc k2_topalg_2 \\
& (k5_toprealb (k1_rcomp_1 k6_numbers k32_sin_cos)))))))))
\end{aligned} \tag{10}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (11)$$

Assume the following.

$$(\neg v1_xboole_0 c45_toprealb)\wedge(m1_subset_1 c45_toprealb (k1_zfmisc_1 k1_numbers)) \quad (12)$$

Assume the following.

$$(\neg v1_xboole_0 c44_toprealb)\wedge(m1_subset_1 c44_toprealb (k1_zfmisc_1 k1_numbers)) \quad (13)$$

Assume the following.

$$c33_toprealb = k6_toprealb k4_sin_cos6 \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(k5_toprealb X0 = X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (17)$$

Theorem 1

$$\begin{aligned} & (v1_funct_1 (k2_partfun1 (u1_struct_0 (k1_pre_topc k2_topalg_2 \\ & (k5_toprealb (k1_rcomp_1 (k1_real_1 np_1) np_1)))) (u1_struct_0 \\ & (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 k6_numbers \\ & k32_sin_cos)))) c33_toprealb (k5_toprealb c44_toprealb)))^{\wedge} \\ & ((v1_funct_2 (k2_partfun1 (u1_struct_0 (k1_pre_topc k2_topalg_2 \\ & (k5_toprealb (k1_rcomp_1 (k1_real_1 np_1) np_1)))) (u1_struct_0 \\ & (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 k6_numbers \\ & k32_sin_cos)))) c33_toprealb (k5_toprealb c44_toprealb)) \\ & (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb c44_toprealb))) \\ & (u1_struct_0 (k1_pre_topc k2_topalg_2 (k5_toprealb c45_toprealb))))^{\wedge} \\ & (m1_subset_1 (k2_partfun1 (u1_struct_0 (k1_pre_topc k2_topalg_2 \\ & (k5_toprealb (k1_rcomp_1 (k1_real_1 np_1) np_1)))) (u1_struct_0 \\ & (k1_pre_topc k2_topalg_2 (k5_toprealb (k1_rcomp_1 k6_numbers \\ & k32_sin_cos)))) c33_toprealb (k5_toprealb c44_toprealb)) \\ & (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k1_pre_topc k2_topalg_2 \\ & (k5_toprealb c44_toprealb))) (u1_struct_0 (k1_pre_topc k2_topalg_2 \\ & (k5_toprealb c45_toprealb)))))) \end{aligned}$$