

t26_ndiff_3 (TMLP- MgMbE1N8uLPiiP3cbCbmPigDaR1Bm6Q)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v7_struct_0 : \iota \Rightarrow o$ be given. Let $v13_algstr_0 : \iota \Rightarrow o$ be given. Let $v2_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_rlvect_1 : \iota \Rightarrow o$ be given. Let $v4_rlvect_1 : \iota \Rightarrow o$ be given. Let $v5_rlvect_1 : \iota \Rightarrow o$ be given. Let $v6_rlvect_1 : \iota \Rightarrow o$ be given. Let $v7_rlvect_1 : \iota \Rightarrow o$ be given. Let $v8_rlvect_1 : \iota \Rightarrow o$ be given. Let $v3_normsp_0 : \iota \Rightarrow o$ be given. Let $v4_normsp_0 : \iota \Rightarrow o$ be given. Let $v2_normsp_1 : \iota \Rightarrow o$ be given. Let $l1_normsp_1 : \iota \Rightarrow o$ be given. Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_ndiff_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_ndiff_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge \\
 & (l1_normsp_1 X0)))))))))) \Rightarrow (\forall X1. \forall X2. ((v3_rcomp_1 \\
 & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 k1_numbers))) \Rightarrow (\forall X3. \\
 & ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\
 & (u1_struct_0 X0)))))) \Rightarrow (((r2_ndiff_3 X0 X3 X1) \wedge (r1_tarski X2 X1)) \Rightarrow \\
 & (r2_ndiff_3 X0 X3 X2)))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\
 & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\
 & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\
 & X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge \\
 & (l1_normsp_1 X0)))))))))) \Rightarrow (\forall X1. ((v1_funct_1 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers (u1_struct_0 \\
 & X0)))))) \Rightarrow ((v3_ndiff_3 X1 X0) \Leftrightarrow (r2_ndiff_3 X0 X1 (k1_relset_1 k1_numbers \\
 & X1))))
 \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v7_struct_0 X0) \wedge ((v13_algstr_0 \\ & X0) \wedge ((v2_rlvect_1 X0) \wedge ((v3_rlvect_1 X0) \wedge ((v4_rlvect_1 X0) \wedge \\ & ((v5_rlvect_1 X0) \wedge ((v6_rlvect_1 X0) \wedge ((v7_rlvect_1 X0) \wedge ((v8_rlvect_1 \\ & X0) \wedge ((v3_normsp_0 X0) \wedge ((v4_normsp_0 X0) \wedge ((v2_normsp_1 X0) \wedge \\ & (l1_normsp_1 X0))))))))))))) \Rightarrow (\forall X1.((v3_rcomp_1 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v3_ndiff_3 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers (u1_struct_0 X0)))))) \Rightarrow ((r1_tarski X1 (k1_relset_1 \\ & k1_numbers X2)) \Rightarrow (r2_ndiff_3 X0 X2 X1)))) \end{aligned}$$