

t32_ndiff_5

(TMJtaxMBs8N7VXPs4J9iGLbApFhydcJcPZZ)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $v2_prvect_2 : \iota \Rightarrow o$ be given. Let $v1_ndiff_5 : \iota \Rightarrow o$ be given. 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k14_prvect_2 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_nfcont_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_ndiff_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_ndiff_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v1_funct_1 \\
 & X0) \wedge ((v1_finseq_1 X0) \wedge ((v2_prvect_2 X0) \wedge (v1_ndiff_5 X0)))))) \Rightarrow \\
 & (\forall X1. ((\neg v2_struct_0 X1) \wedge ((\neg v7_struct_0 X1) \wedge ((v13_algstr_0 \\
 & X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
 & ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 \\
 & X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge \\
 & (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2. \forall X3. ((v1_funct_1 \\
 & X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (\\
 & k14_prvect_2 X0)) (u1_struct_0 X1)))))) \Rightarrow (\forall X4. (m1_subset_1 \\
 & X4 (k1_zfmisc_1 (u1_struct_0 (k14_prvect_2 X0)))) \Rightarrow ((v3_nfcont_1 \\
 & X4 (k14_prvect_2 X0)) \Rightarrow ((r2_ndiff_5 X0 X1 X2 X3 X4) \Leftrightarrow ((r1_tarski \\
 & X4 (k1_relset_1 (u1_struct_0 (k14_prvect_2 X0)) X3)) \wedge (\forall X5. \\
 & (m1_subset_1 X5 (u1_struct_0 (k14_prvect_2 X0))) \Rightarrow ((X5 \in X4) \Rightarrow (\\
 & r1_ndiff_5 X0 X1 X2 X3 X5)))))))))
 \end{aligned}
 \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finseq_1 X0) \wedge ((v2_prvect_2 X0) \wedge (v1_ndiff_5 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((\neg v7_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
& ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 \\
& X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge \\
& (l1_normsp_1 X1))))))))))))) \Rightarrow (\forall X2. \forall X3. ((v1_funct_1 \\
& X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (\\
& k14_prvect_2 X0)) (u1_struct_0 X1)))))) \Rightarrow (\forall X4. (r2_ndiff_5 \\
X0 X1 X2 X3 X4) \Leftrightarrow ((r1_tarski X4 (k1_relset_1 (u1_struct_0 (k14_prvect_2 \\
& X0)) X3) \wedge (\forall X5. (m1_subset_1 X5 (u1_struct_0 (k14_prvect_2 \\
& X0))) \Rightarrow ((X5 \in X4) \Rightarrow (r1_ndiff_5 X0 X1 X2 (k2_partfun1 (u1_struct_0 \\
& (k14_prvect_2 X0)) (u1_struct_0 X1) X3 X4 X5)))))))))
\end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((v1_relat_1 X0) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finseq_1 X0) \wedge ((v2_prvect_2 X0) \wedge (v1_ndiff_5 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2_struct_0 X1) \wedge ((\neg v7_struct_0 X1) \wedge ((v13_algstr_0 \\
& X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 X1) \wedge \\
& ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge ((v8_rlvect_1 \\
& X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 X1) \wedge \\
& (l1_normsp_1 X1))))))))))))) \Rightarrow (\forall X2. \forall X3. (m1_subset_1 \\
& X3 (k1_zfmisc_1 (u1_struct_0 (k14_prvect_2 X0))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 (\\
& u1_struct_0 (k14_prvect_2 X0)) (u1_struct_0 X1)))))) \Rightarrow ((v3_nfcont_1 \\
X3 (k14_prvect_2 X0) \Rightarrow ((r2_ndiff_5 X0 X1 X2 X4 X3) \Leftrightarrow ((r1_tarski \\
& X3 (k1_relset_1 (u1_struct_0 (k14_prvect_2 X0)) X4) \wedge (\forall X5. \\
& (m1_subset_1 X5 (u1_struct_0 (k14_prvect_2 X0))) \Rightarrow ((X5 \in X3) \Rightarrow (\\
& r1_ndiff_5 X0 X1 X2 X4 X5)))))))))
\end{aligned}$$