

t11_rsspace4
(TMJ8AuSn4xRSodHGLj987BR7eZewZf5gG2B)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ 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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $v1_rsspace4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $k7_rsspace4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $m1_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge (((\neg v2_struct_0 \\ & X1) \wedge ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge \\ & ((v4_rlvect_1 X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 \\ & X1) \wedge ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge \\ & ((v2_normsp_1 X1) \wedge (l1_normsp_1 X1)))))))))))))) \wedge ((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 (u1_struct_0 X1))))))) \Rightarrow ((\neg v1_xboole_0 (k7_rsspace4 \\ & X0 X1 X2)) \wedge (m1_subset_1 (k7_rsspace4 X0 X1 X2) (k1_zfmisc_1 k1_numbers))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
& X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\
& ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\
& X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \Rightarrow (k7_rsspace4 X0 X1 X2 = ReplSep \\
& (toset (\lambda X3 : \iota.m1_subset_1 X3 X0)) (\lambda X3 : \iota.True) (\lambda X3 : \\
& \iota.k1_normsp_0 X1 (k3_funct_2 X0 (u1_struct_0 X1) X2 X3))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\
& ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\
& X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\
& ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\
& X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2.((v1_funct_1 \\
& X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 X1)) \wedge (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \Rightarrow ((v1_rsspace4 X2 X0 X1) \Leftrightarrow \\
& (\exists X3.(m1_subset_1 X3 k1_numbers) \wedge ((r1_xxreal_0 k6_numbers \\
& X3) \wedge (\forall X4.(m1_subset_1 X4 X0) \Rightarrow (r1_xxreal_0 (k1_normsp_0 \\
& X1 (k3_funct_2 X0 (u1_struct_0 X1) X2 X4) X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\
& m1_xxreal_2 X1 X0) \Leftrightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\
& X2 X1))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v2_membered X0) \Rightarrow ((v4_xxreal_2 X0) \Leftrightarrow (\exists X1.(\\
& v1_xxreal_0 X1) \wedge (m1_xxreal_2 X1 X0)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered \\
& X0)
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1_xxreal_0 X0) \Rightarrow (v1_xxreal_0 X0)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_membered X0) \Rightarrow (v2_membered X0)
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xxreal_0 X0)
\end{aligned} \tag{9}$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v2_struct_0 X1) \wedge \\ & ((v13_algstr_0 X1) \wedge ((v2_rlvect_1 X1) \wedge ((v3_rlvect_1 X1) \wedge ((v4_rlvect_1 \\ & X1) \wedge ((v5_rlvect_1 X1) \wedge ((v6_rlvect_1 X1) \wedge ((v7_rlvect_1 X1) \wedge \\ & ((v8_rlvect_1 X1) \wedge ((v3_normsp_0 X1) \wedge ((v4_normsp_0 X1) \wedge ((v2_normsp_1 \\ & X1) \wedge (l1_normsp_1 X1)))))))))) \Rightarrow (\forall X2.((v1_funct_1 \\ & X2) \wedge ((v1_funct_2 X2 X0 (u1_struct_0 X1)) \wedge ((v1_rsspace4 X2 X0 X1) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 (u1_struct_0 X1)))))) \Rightarrow \\ & (v4_xxreal_2 (k7_rsspace4 X0 X1 X2)))) \end{aligned}$$