

t42_lpspace1

(TMT1tybsURPMpwmngECW2esyXQPjnhtgZHkh)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_prob_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k7_numbers : \iota$ be given. Let $v10_valued_0 : \iota \Rightarrow o$ be given. Let $v6_supinf_2 : \iota \Rightarrow o$ be given. Let $v4_measure1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_lpspace1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_lpspace1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_lpspace1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
 & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
 & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
 & X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
 & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
 & (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
 & X0 k1_numbers)))) \Rightarrow (\forall X4. ((v1_funct_1 X4) \wedge (m1_subset_1 \\
 & X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (((X3 \in k9_lpspace1 \\
 & X0 X1 X2) \wedge (X4 \in k9_lpspace1 X0 X1 X2)) \Rightarrow ((k13_lpspace1 X0 X1 X2 X3 = \\
 & k13_lpspace1 X0 X1 X2 X4) \Leftrightarrow (r1_lpspace1 X0 X1 X2 X3 X4))))))
 \end{aligned}$$

(1)

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\
& X1) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X1) \wedge ((v4_prob_1 \\
& X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 k7_numbers) \wedge ((v10_valued_0 \\
& X3) \wedge ((v6_supinf_2 X3) \wedge ((v4_measure1 X3 X1 X2) \wedge (m1_subset_1 X3 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X2 k7_numbers)))))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\
& k1_numbers)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))) \Rightarrow ((r1_lpspace1 X1 \\
& X2 X3 X4 X5) \Rightarrow (r1_lpspace1 X1 X2 X3 (k26_valued_1 X1 k1_numbers X4 \\
& X0) (k26_valued_1 X1 k1_numbers X5 X0))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\
& X1) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X1) \wedge ((v4_prob_1 \\
& X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 k7_numbers) \wedge ((v10_valued_0 \\
& X3) \wedge ((v6_supinf_2 X3) \wedge ((v4_measure1 X3 X1 X2) \wedge (m1_subset_1 X3 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X2 k7_numbers)))))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\
& k1_numbers)))) \Rightarrow ((X4 \in k9_lpspace1 X1 X2 X3) \Rightarrow (k26_valued_1 X1 k1_numbers \\
& X4 X0 \in k9_lpspace1 X1 X2 X3))))))
\end{aligned} \tag{3}$$

Assume the following.

$$v3_membered k1_numbers \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3)) \Rightarrow ((v1_funct_1 (k26_valued_1 X0 X1 \\
& X2 X3)) \wedge (m1_subset_1 (k26_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v3_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow \\
& (v1_xreal_0 X1))
\end{aligned} \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\ & X1) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X1) \wedge ((v4_prob_1 \\ & X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (\forall X3. \\ & ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 k7_numbers) \wedge ((v10_valued_0 \\ & X3) \wedge ((v6_supinf_2 X3) \wedge ((v4_measure1 X3 X1 X2) \wedge (m1_subset_1 X3 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X2 k7_numbers)))))) \Rightarrow (\forall X4. \\ & ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\ & k1_numbers)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 \\ & (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))) \Rightarrow (((X4 \in k9_lpspace1 \\ & X1 X2 X3) \wedge ((X5 \in k9_lpspace1 X1 X2 X3) \wedge (k13_lpspace1 X1 X2 X3 X4 = k13_lpspace1 \\ & X1 X2 X3 X5))) \Rightarrow (k13_lpspace1 X1 X2 X3 (k26_valued_1 X1 k1_numbers \\ & X4 X0) = k13_lpspace1 X1 X2 X3 (k26_valued_1 X1 k1_numbers X5 X0)))))) \end{aligned}$$