

t44_lpspace1 (TMM- FrXWmQTCsW6o1McJjCgehk2iZqKHCqU4)

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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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $r3_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k56_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_supinf_1 : \iota$ be given. Let $k1_supinf_1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k1_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1_xboole_0 X0) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3. ((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))) \Rightarrow ((\exists X4. (m2_subset_1 X4 (k1_zfmisc_1 \\
& X0) X1) \wedge ((X4 = k1_relset_1 X0 X3) \wedge (r1_mesfunc6 X0 X1 X3 X4))) \Rightarrow ((\\
& r3_mesfunc6 X0 X1 X2 X3) \Leftrightarrow (r3_mesfunc6 X0 X1 X2 (k56_valued_1 X0 k1_numbers \\
& X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow ((r3_mesfunc6 X0 X1 X2 X3) \Rightarrow ((\neg r1_xxreal_0 (\\ & k1_mesfunc6 X0 X1 X2 X3) k2_supinf_1) \wedge (\neg r1_xxreal_0 k1_supinf_1 \\ & (k1_mesfunc6 X0 X1 X2 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\neg(\neg X0 \in k1_numbers) \wedge ((X0 \neq k1_xxreal_0) \wedge (X0 \neq k2_xxreal_0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (4)$$

Assume the following.

$$k2_supinf_1 = k2_xxreal_0 \quad (5)$$

Assume the following.

$$k1_supinf_1 = k1_xxreal_0 \quad (6)$$

Assume the following.

$$v3_membered k1_numbers \quad (7)$$

Assume the following.

$$v1_xxreal_0 k2_xxreal_0 \quad (8)$$

Assume the following.

$$v2_membered k7_numbers \quad (9)$$

Assume the following.

$$v1_xxreal_0 k1_xxreal_0 \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_membered X1) \wedge ((v1_funct_1 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 \\ & (k56_valued_1 X0 X1 X2)) \wedge (m1_subset_1 (k56_valued_1 X0 X1 X2) (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1_xboole_0 X0)\wedge \\ & (((\neg v1_xboole_0 X1)\wedge((v1_prob_1 X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k1_zfmisc_1 X0))))))\wedge(((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 X1 k7_numbers)\wedge((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))))\wedge \\ & ((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 \\ & k1_numbers))))))\Rightarrow(m1_subset_1 (k1_mesfunc6 X0 X1 X2 X3) k7_numbers) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((v1_funct_1 X1)\wedge(\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers))))\Rightarrow \\ & ((v1_funct_1 (k1_mesfunc5 X0 X1))\wedge(m1_subset_1 (k1_mesfunc5 \\ & X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 X0 k7_numbers)))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge(\\ & m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers))))\Rightarrow(\\ & k1_mesfunc5 X0 X1 = X1) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge \\ & ((v1_prob_1 X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 X1 k7_numbers)\wedge((v10_valued_0 X2)\wedge((v6_supinf_2 X2)\wedge((v4_measure1 \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers))))))))\Rightarrow \\ & (\forall X3.((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers))))\Rightarrow((r3_mesfunc6 X0 X1 X2 X3)\Leftrightarrow(r1_mesfunc5 X0 X1 \\ & X2 (k1_mesfunc5 X0 X3)))) \end{aligned} \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((\neg v1_xboole_0 X1)\wedge \\ & ((v1_prob_1 X1 X0)\wedge((v4_prob_1 X1 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0))))))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers))))\Rightarrow(\forall X3.(\\ & m2_subset_1 X3 (k1_zfmisc_1 X0) X1)\Rightarrow((r1_mesfunc6 X0 X1 X2 X3)\Leftrightarrow \\ & (r1_mesfunc1 X0 X1 (k1_mesfunc5 X0 X2) X3)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k7_numbers)))) \Rightarrow ((r1_mesfunc5 X0 X1 X2 X3) \Leftrightarrow ((\exists X4.(m2_subset_1 \\
& X4 (k1_zfmisc_1 X0) X1) \wedge ((X4 = k1_relset_1 X0 X3) \wedge (r1_mesfunc1 \\
& X0 X1 X3 X4)) \wedge ((\neg r1_xxreal_0 k1_supinf_1 (k6_mesfunc5 X0 X1 X2 \\
& (k1_mesfunc2 X0 X3)) \wedge (\neg r1_xxreal_0 k1_supinf_1 (k6_mesfunc5 \\
& X0 X1 X2 (k2_mesfunc2 X0 X3))))))))))
\end{aligned} \tag{17}$$

Assume the following.

$$\forall X0.(v3_membered X0) \Rightarrow (v1_membered X0) \tag{18}$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_xxreal_0 X1)) \tag{19}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))) \Rightarrow ((r3_mesfunc6 X0 X1 X2 X3) \Rightarrow ((k1_mesfunc6 X0 \\
& X1 X2 X3 \in k1_numbers) \wedge ((k1_mesfunc6 X0 X1 X2 (k56_valued_1 X0 k1_numbers \\
& X3) \in k1_numbers) \wedge (r3_mesfunc6 X0 X1 X2 (k56_valued_1 X0 k1_numbers \\
& X3))))))))))
\end{aligned}$$