

t46_lpspace2 (TMc- NCt2rY4KYxw37kS53pwhGAw46FQC2Ntb)

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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 $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k5_lpspace2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ 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 $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_lpspace1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\forall X5.(\\ & (v2_xxreal_0 X5) \wedge (m1_subset_1 X5 k1_numbers)) \Rightarrow ((r1_lpspace1 \\ & X0 X1 X2 X3 X4) \Rightarrow (k5_lpspace2 X0 X1 X2 X3 X5 = k5_lpspace2 X0 X1 X2 X4 X5)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\
& ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\
& X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\
& X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\
& (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\
& X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\forall X5.(\\
& (v2_xreal_0 X5) \wedge (m1_subset_1 X5 k1_numbers)) \Rightarrow ((k5_lpspace2 \\
& X0 X1 X2 X4 X5 = k5_lpspace2 X0 X1 X2 X3 X5) \Rightarrow ((\forall X6.(m2_subset_1 \\
& X6 (k1_zfmisc_1 X0) X1) \Rightarrow (\neg(k1_funct_1 X2 (k3_subset_1 X0 X6) = k6_numbers) \wedge \\
& ((X6 = k1_relset_1 X0 X3) \wedge (r1_mesfunc6 X0 X1 X3 X6)))) \vee ((k5_lpspace2 \\
& X0 X1 X2 X4 X5 = k1_xboole_0) \vee (r1_lpspace1 X0 X1 X2 X4 X3))))))))) \Rightarrow \\
& \quad \quad \quad (3)
\end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1.(\neg v1_xboole_0 \\
& X1) \Rightarrow (\forall X2.((\neg v1_xboole_0 X2) \wedge ((v1_prob_1 X2 X1) \wedge ((v4_prob_1 \\
& X2 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_zfmisc_1 X1)))))) \Rightarrow (\forall X3. \\
& ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X2 k7_numbers) \wedge ((v10_valued_0 \\
& X3) \wedge ((v6_supinf_2 X3) \wedge ((v4_measure1 X3 X1 X2) \wedge (m1_subset_1 X3 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X2 k7_numbers)))))) \Rightarrow (\forall X4. \\
& ((v1_funct_1 X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\
& k1_numbers)))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge (m1_subset_1 X5 \\
& (k1_zfmisc_1 (k2_zfmisc_1 X1 k1_numbers)))) \Rightarrow ((r1_lpspace1 X1 \\
& X2 X3 X4 X5) \Rightarrow (r1_lpspace1 X1 X2 X3 (k26_valued_1 X1 k1_numbers X4 \\
& X0) (k26_valued_1 X1 k1_numbers X5 X0))))))))) \Rightarrow \\
& \quad \quad \quad (4)
\end{aligned}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (5)$$

Assume the following.

$$\forall X0.\exists X1.(m1_subset_1 X1 (k1_zfmisc_1 X0)) \wedge (v1_xboole_0 X1) \quad (6)$$

Assume the following.

$$v3_membered k1_numbers \quad (7)$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3)) \Rightarrow ((v1_funct_1 (k26_valued_1 X0 X1 \\
& X2 X3)) \wedge (m1_subset_1 (k26_valued_1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 k1_numbers)))))) \Rightarrow \\
& \quad \quad \quad (8)
\end{aligned}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((\neg v1_xboole_0 X1) \wedge \\ & ((v1_prob_1 X1 X0) \wedge ((v4_prob_1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k1_zfmisc_1 X0)))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X1 k7_numbers) \wedge ((v10_valued_0 X2) \wedge ((v6_supinf_2 X2) \wedge ((v4_measure1 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 k7_numbers)))))) \Rightarrow \\ & (\forall X3.((v1_funct_1 X3) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge (m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow (\forall X5.(\\ & m1_subset_1 X5 k1_numbers) \Rightarrow (\forall X6.((v2_xreal_0 X6) \wedge (m1_subset_1 \\ & X6 k1_numbers) \Rightarrow ((k5_lpspace2 X0 X1 X2 X3 X6 = k5_lpspace2 X0 X1 X2 \\ & X4 X6) \Rightarrow ((\forall X7.(m2_subset_1 X7 (k1_zfmisc_1 X0) X1) \Rightarrow (\neg(k1_funct_1 \\ & X2 (k3_subset_1 X0 X7) = k6_numbers) \wedge ((k1_relset_1 X0 X3 = X7) \wedge (\\ & r1_mesfunc6 X0 X1 X3 X7)))) \vee ((\forall X7.(m2_subset_1 X7 (k1_zfmisc_1 \\ & X0) X1) \Rightarrow (\neg(k1_funct_1 X2 (k3_subset_1 X0 X7) = k6_numbers) \wedge ((k1_relset_1 \\ & X0 X4 = X7) \wedge (r1_mesfunc6 X0 X1 X4 X7)))) \vee ((v1_xboole_0 (k5_lpspace2 \\ & X0 X1 X2 X3 X6) \vee (k5_lpspace2 X0 X1 X2 (k26_valued_1 X0 k1_numbers \\ & X3 X5) X6 = k5_lpspace2 X0 X1 X2 (k26_valued_1 X0 k1_numbers X4 X5) \\ & X6))))))))))))) \end{aligned}$$