

l29_lp_space
(TMQ7UCv1MkmfkNBiGXGXjCk4hA5gBhX7q78)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ 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 $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_series_1 : \iota \Rightarrow o$ be given. Let $k1_lp_space : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_series_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_series_1 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (((r1_xxreal_0 np_1 \\
& X2) \wedge ((v1_series_1 (k1_lp_space X0 X2)) \wedge (v1_series_1 (k1_lp_space \\
& X1 X2)))))) \Rightarrow ((v1_series_1 (k1_lp_space (k1_series_1 k1_numbers \\
& X0 X1) X2)) \wedge (r1_xxreal_0 (k4_power (k4_series_1 (k1_lp_space \\
& (k1_series_1 k1_numbers X0 X1) X2)) (k10_real_1 np_1 X2)) (k7_real_1 \\
& (k4_power (k4_series_1 (k1_lp_space X0 X2)) (k10_real_1 np_1 \\
& X2)) (k4_power (k4_series_1 (k1_lp_space X1 X2)) (k10_real_1 np_1 \\
& X2)))))))))
\end{aligned} \tag{1}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow ((r1_xxreal_0 np_1 X0) \Rightarrow \\
& (\forall X1.((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers k1_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow \\
& (((v1_series_1 (k1_lp_space X1 X0)) \wedge (v1_series_1 (k1_lp_space \\
& X2 X0))) \Rightarrow (v1_series_1 (k1_lp_space (k1_series_1 k1_numbers X1 \\
& X2) X0))))))
\end{aligned}$$