

t4_pcomps_2

(TMSUgGuGaJtLARyTZrWcvSvbPjiF1x85StU)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $v6_metric_1 : \iota \Rightarrow o$ be given. Let $v7_metric_1 : \iota \Rightarrow o$ be given. Let $v8_metric_1 : \iota \Rightarrow o$ be given. Let $v9_metric_1 : \iota \Rightarrow o$ be given. Let $l1_metric_1 : \iota \Rightarrow o$ 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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_pcomps_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_pcomps_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $g1_metric_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_metric_1 : \iota \Rightarrow o$ be given. Let $u1_metric_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) k1_numbers)))))) \Rightarrow (\forall X2. \forall X3. (\\ & g1_metric_1 X0 X1 = g1_metric_1 X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) k1_numbers)))))) \Rightarrow ((v1_metric_1 (k4_pcomps_1 \\ & X0 X1)) \wedge ((v6_metric_1 (k4_pcomps_1 X0 X1)) \wedge ((v7_metric_1 (k4_pcomps_1 \\ & X0 X1)) \wedge ((v8_metric_1 (k4_pcomps_1 X0 X1)) \wedge ((v9_metric_1 (k4_pcomps_1 \\ & X0 X1)) \wedge (l1_metric_1 (k4_pcomps_1 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (k2_zfmisc_1 \\ & X0 X0) k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ & (k2_zfmisc_1 X0 X0) k1_numbers)))))) \Rightarrow ((r1_pcomps_1 X0 X1) \Rightarrow (k4_pcomps_1 \\ & X0 X1 = g1_metric_1 X0 X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(l1_metric_1 X0) \Rightarrow ((v1_metric_1 X0) \Rightarrow (X0 = g1_metric_1 (u1_struct_0 X0) (u1_metric_1 X0))) \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((v2_pre_topc X0) \wedge (l1_pre_topc X0))) \Rightarrow (\forall X1.((v6_metric_1 X1) \wedge ((v7_metric_1 X1) \wedge ((v8_metric_1 X1) \wedge ((v9_metric_1 X1) \wedge (l1_metric_1 X1))))) \Rightarrow (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) k1_numbers) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) k1_numbers)))))) \Rightarrow ((r1_pcomps_1 (u1_struct_0 X0) X2) \wedge (X1 = k4_pcomps_1 (u1_struct_0 X0) X2))) \Rightarrow (u1_struct_0 X1 = u1_struct_0 X0))) \end{aligned}$$