

t10_pscomp_1

(TMZcxj2hTYcmL94tL3QzQ4uH8eDrZ3Gy2yT)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_pscomp_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_measure6 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v2_rcomp_1 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k7_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v4_pre_topc : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)) \Rightarrow \\
& (\forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 k1_numbers) \wedge \\
& (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers))))) \Rightarrow \\
& (\forall X3. (m1_subset_1 X3 k1_numbers) \Rightarrow (k8_relset_1 X0 k1_numbers \\
& (k9_valued_1 X0 k1_numbers X2 X3) X1 = k8_relset_1 X0 k1_numbers \\
& X2 (k2_measure6 X1 (k1_real_1 X3))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (\forall X1. \\
& (m1_subset_1 X1 k1_numbers) \Rightarrow ((v2_rcomp_1 X0) \Leftrightarrow (v2_rcomp_1 (k2_measure6 \\
& X0 X1))))
\end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\
& (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k9_valued_1 X0 X1 X2 X3 = k7_valued_1 \\
& X2 X3)
\end{aligned} \tag{3}$$

Assume the following.

$$v3_membered\ k1_numbers \quad (4)$$

Assume the following.

$$\neg v1_xboole_0\ k1_numbers \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((\neg v1_xboole_0 \\ & X1)\wedge(v1_membered\ X1))\wedge(((v1_funct_1\ X2)\wedge((v1_funct_2\ X2\ X0\ X1)\wedge \\ & (m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))))\wedge(v1_xcmplx_0 \\ & X3))\Rightarrow((v1_funct_1\ (k7_valued_1\ X2\ X3))\wedge(v1_partfun1\ (k7_valued_1 \\ & X2\ X3)\ X0)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_relat_1\ X0)\wedge((v1_funct_1\ X0)\wedge(v3_valued_0 \\ & X0)))\wedge(v1_xreal_0\ X1))\Rightarrow((v1_relat_1\ (k7_valued_1\ X0\ X1))\wedge((\\ & v1_funct_1\ (k7_valued_1\ X0\ X1))\wedge(v3_valued_0\ (k7_valued_1\ X0 \\ & X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k9_valued_1\ X0\ X1\ X2 \\ & X3))\wedge(m1_subset_1\ (k9_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v3_membered\ X0)\wedge(v1_xreal_0\ X1))\Rightarrow(m1_subset_1\ (k2_measure6\ X0\ X1)\ (k1_zfmisc_1\ k1_numbers)) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(m1_subset_1\ (k1_real_1\ X0)\ k1_numbers) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1_pre_topc\ X0)\Rightarrow(\forall X1.((v1_funct_1\ X1)\wedge((\\ & v1_funct_2\ X1\ (u1_struct_0\ X0)\ k1_numbers)\wedge(m1_subset_1\ X1\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ (u1_struct_0\ X0)\ k1_numbers))))))\Rightarrow((v1_pscomp_1 \\ & X1\ X0)\Leftrightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ k1_numbers))\Rightarrow \\ & ((v2_rcomp_1\ X2)\Rightarrow(v4_pre_topc\ (k8_reset_1\ (u1_struct_0\ X0)\ \\ & k1_numbers\ X1\ X2)\ X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(v3_membered X0) \quad (12)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v1_membered X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v1_partfun1 X2 X0)\Rightarrow(v1_funct_2 X2 X0 X1)) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered X1)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v3_valued_0 X2)) \quad (18)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.(l1_pre_topc X1)\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X1) k1_numbers)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X1) k1_numbers))))))\Rightarrow((v1_pscomp_1 X2 X1)\Rightarrow(v1_pscomp_1 (k9_valued_1 (u1_struct_0 X1) k1_numbers X2 X0) X1))))$$