

t10_yellow17

(TMFh6XSeT7FVyirPzZyeZgjMuNWnDHLP1vy)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_waybel_3 : \iota \Rightarrow o$ be given. Let $v1_waybel18 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k3_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_card_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_card_3 : \iota \Rightarrow \iota$ be given. Let $v2_pralg_1 : \iota \Rightarrow o$ be given. Let $k12_pralg_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_pralg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_pre_topc : \iota \Rightarrow o$ be given. Let $v2_pre_topc : \iota \Rightarrow o$ be given. Let $v1_tops_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_cantor_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.(X1 \in \\ k9_xtuple_0 X0) \Rightarrow (k8_relat_1 (k12_card_3 X0 X1) (k1_funct_1 X0 \\ X1) = k4_card_3 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (\\ (v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge (v2_pralg_1 \\ X1)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (k1_funct_1 (k12_pralg_1 \\ X0 X1) X2 = u1_struct_0 (k10_pralg_1 X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k8_relset_1 X0 X1 X2 X3 = k8_relat_1 X2 X3) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 X1)\wedge(v1_waybel18 X1))))))\wedge(m1_subset_1 X2 X0)))\Rightarrow(k4_waybel18 X0 X1 X2 = k1_funct_1 X1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v2_pralg_1 X1))))))\wedge(m1_subset_1 X2 X0)))\Rightarrow(k10_pralg_1 X0 X1 X2 = k1_funct_1 X1 X2) \quad (7)$$

Assume the following.

$$\forall X0.(l1_pre_topc X0)\Rightarrow(l1_struct_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 X1)\wedge(v1_waybel18 X1))))))\wedge(m1_subset_1 X2 X0)))\Rightarrow(((v1_funct_1 (k6_waybel18 X0 X1 X2))\wedge((v1_funct_2 (k6_waybel18 X0 X1 X2) (u1_struct_0 (k3_waybel18 X0 X1) (u1_struct_0 (k4_waybel18 X0 X1 X2)))\wedge(m1_subset_1 (k6_waybel18 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k3_waybel18 X0 X1) (u1_struct_0 (k4_waybel18 X0 X1 X2)))))))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 X1)\wedge(v1_waybel18 X1))))))\Rightarrow((v1_pre_topc (k3_waybel18 X0 X1))\wedge((v2_pre_topc (k3_waybel18 X0 X1))\wedge(l1_pre_topc (k3_waybel18 X0 X1)))) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ (v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge(v2_pralg_1 X1))))\Rightarrow((\\ v1_relat_1 (k12_pralg_1 X0 X1))\wedge((v4_relat_1 (k12_pralg_1 X0 \\ X1) X0)\wedge((v1_funct_1 (k12_pralg_1 X0 X1))\wedge(v1_partfun1 (k12_pralg_1 \\ X0 X1) X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge(((v1_relat_1 \\ X1)\wedge((v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge \\ (v2_pralg_1 X1))))))\wedge(m1_subset_1 X2 X0))\Rightarrow(l1_struct_0 (k10_pralg_1 \\ X0 X1 X2)) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0)\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(\\ (v4_relat_1 X1 X0)\wedge((v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 \\ X1)\wedge(v1_waybel18 X1))))))\Rightarrow(\forall X2.(m1_subset_1 X2 X0)\Rightarrow(\\ k6_waybel18 X0 X1 X2 = k12_card_3 (k12_pralg_1 X0 X1) X2))) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge(\\ (v1_funct_1 X1)\wedge((v1_partfun1 X1 X0)\wedge((v4_waybel_3 X1)\wedge(v1_waybel18 \\ X1))))))\Rightarrow(\forall X2.((v1_pre_topc X2)\wedge((v2_pre_topc X2)\wedge(\\ l1_pre_topc X2)))\Rightarrow((X2 = k3_waybel18 X0 X1)\Leftrightarrow((u1_struct_0 X2 = \\ k4_card_3 (k12_pralg_1 X0 X1))\wedge((v1_tops_2 (k2_waybel18 X0 X1) \\ X2)\wedge((v2_cantor_1 (k2_waybel18 X0 X1) X2)\wedge(m1_subset_1 (k2_waybel18 \\ X0 X1) (k1_zfmisc_1 (k1_zfmisc_1 (u1_struct_0 X2)))))))))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k2_struct_0 X0 = u1_struct_0 X0) \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(\\ (v1_partfun1 X1 X0)\Leftrightarrow(k1_relset_1 X0 X1 = X0)) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_waybel18 X0)))\Rightarrow \\ ((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v2_pralg_1 X0))) \end{aligned} \quad (17)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge \\ & (v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge ((v1_partfun1 X1 X0) \wedge ((v4_waybel_3 \\ & X1) \wedge (v1_waybel18 X1)))))) \Rightarrow (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (\\ & k8_relset_1 (u1_struct_0 (k3_waybel18 X0 X1)) (u1_struct_0 (k4_waybel18 \\ & X0 X1 X2)) (k6_waybel18 X0 X1 X2) (k2_struct_0 (k4_waybel18 X0 X1 \\ & X2)) = k2_struct_0 (k3_waybel18 X0 X1))) \end{aligned}$$