

t54_tops_2 (TMcPZf-
SiRY33ATs4uhBh6hMUVmPpPux9HPs)

October 27, 2020

Let $l1_struct_0 : \iota \Rightarrow o$ 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 $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_rreset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_struct_0 : \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k7_rreset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_rreset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $v3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v2_funct_1 X1) \Rightarrow (k7_relat_1 X1 X0 = k8_relat_1 (k2_funct_1 X1) X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k8_rreset_1 X0 X1 X2 X3 = k8_relat_1 X2 X3) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k7_rreset_1 X0 X1 X2 X3 = k7_relat_1 X2 X3) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 (k2_tops_2 X0 X1 X2)) \wedge ((v1_funct_2 (k2_tops_2 X0 X1 X2) X1 X0) \wedge (m1_subset_1 (k2_tops_2 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))))) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 \\ & X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow \\ & ((v3_funct_2 X2 X0 X1)\Rightarrow(k2_tops_2 X0 X1 X2 = k2_funct_1 X2)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k2_struct_0 X0 = u1_struct_0 X0) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(\\ & (v2_funct_2 X1 X0)\Leftrightarrow(k2_relset_1 X0 X1 = X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(v2_funct_2 \\ & X2 X1)))\Rightarrow((v1_funct_1 X2)\wedge(v3_funct_2 X2 X0 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.(l1_struct_0 X0)\Rightarrow(\forall X1.(l1_struct_0 X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 \\ & X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X1))))))\Rightarrow(\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 \\ & (u1_struct_0 X0)))\Rightarrow(((k2_relset_1 (u1_struct_0 X1) X2 = k2_struct_0 \\ & X1)\wedge(v2_funct_1 X2))\Rightarrow(k7_relset_1 (u1_struct_0 X0) (u1_struct_0 \\ & X1) X2 X3 = k8_relset_1 (u1_struct_0 X1) (u1_struct_0 X0) (k2_tops_2 \\ & (u1_struct_0 X0) (u1_struct_0 X1) X2) X3)))))) \end{aligned}$$