

t32_waybel_1

(TMLiQ6b2y2pkci4HkTkiKRkU9oxhyrYzjMU)

October 27, 2020

Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ 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 $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_yellow_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_waybel_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k3_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_relat_1 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k6_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_partfun1 : \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1_struct_0 : \iota \Rightarrow o$ be given. Let $v1_orders_2 : \iota \Rightarrow o$ be given. Let $k5_yellow_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_yellow_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_struct_0 : \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (k3_relat_1 X0 (k4_relat_1 (k10_xtuple_0 X0)) = X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2) \wedge \\ & ((v1_funct_2 X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))))) \wedge ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((r2_funct_2 X0 X1 X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k6_relset_1 X0 X1 X2 X3 = k6_relat_1 X2 X3) \quad (3)$$

Assume the following.

$$\forall X0.k6_partfun1 X0 = k4_relat_1 X0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & (((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1))))\wedge((v1_funct_1 X5)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X2 X3))))\Rightarrow(k1_partfun1 X0 X1 X2 X3 X4 X5 = k3_relat_1 X4 X5) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(k6_relat_1 (k10_xtuple_0 X0) X0 = X0) \quad (7)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(\forall X1.(m1_yellow_0 X1 X0)\Rightarrow(l1_orders_2 X1)) \quad (8)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow(l1_struct_0 X0) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((l1_orders_2 X0)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (u1_struct_0 X0))))\Rightarrow((v1_orders_2 (k5_yellow_0 X0 X1))\wedge((v4_yellow_0 \\ & (k5_yellow_0 X0 X1) X0)\wedge(m1_yellow_0 (k5_yellow_0 X0 X1) X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 \\ & X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & ((v1_funct_1 (k3_waybel_1 X0 X1 X2))\wedge((v1_funct_2 (k3_waybel_1 \\ & X0 X1 X2) (u1_struct_0 (k1_yellow_2 X0 X1 X2)) (u1_struct_0 X1))\wedge \\ & (m1_subset_1 (k3_waybel_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 (k1_yellow_2 X0 X1 X2)) (u1_struct_0 X1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 \\ & X0))\wedge(((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & ((v1_funct_1 (k2_waybel_1 X0 X1 X2))\wedge((v1_funct_2 (k2_waybel_1 \\ & X0 X1 X2) (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 X1 X2)))\wedge \\ & (m1_subset_1 (k2_waybel_1 X0 X1 X2) (k1_zfmisc_1 (k2_zfmisc_1 \\ & (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 X1 X2)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(m1_subset_1 (k2_relset_1 X0 X1) (k1_zfmisc_1 X0)) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\wedge((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\wedge((v1_funct_1 X2)\wedge \\ & ((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & ((v1_orders_2 (k1_yellow_2 X0 X1 X2))\wedge((v4_yellow_0 (k1_yellow_2 X0 X1 X2) X1)\wedge(m1_yellow_0 (k1_yellow_2 X0 X1 X2) X1))) \end{aligned} \quad (14)$$

Assume the following.

$$\forall X0.(l1_struct_0 X0)\Rightarrow(k3_struct_0 X0 = k6_partfun1 (u1_struct_0 X0)) \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & (k1_yellow_2 X0 X1 X2 = k5_yellow_0 X1 (k2_relset_1 (u1_struct_0 X1) X2)))) \end{aligned} \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & (k3_waybel_1 X0 X1 X2 = k3_struct_0 (k1_yellow_2 X0 X1 X2)))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(\forall X1. \\ & ((\neg v2_struct_0 X1)\wedge(l1_orders_2 X1))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 (u1_struct_0 X0) (u1_struct_0 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X1))))))\Rightarrow \\ & (k2_waybel_1 X0 X1 X2 = k6_relset_1 (u1_struct_0 X0) (u1_struct_0 X1) (u1_struct_0 (k1_yellow_2 X0 X1 X2) X2))) \end{aligned} \quad (18)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1_orders_2 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (u1_struct_0 X0))) \Rightarrow (\forall X2.((v1_orders_2 X2) \wedge ((v4_yellow_0 \\ X2 X0) \wedge (m1_yellow_0 X2 X0))) \Rightarrow ((X2 = k5_yellow_0 X0 X1) \Leftrightarrow (u1_struct_0 \\ X2 = X1)))) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 \\ (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (21)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0 X0) \wedge (l1_orders_2 X0)) \Rightarrow (\forall X1. \\ ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 (u1_struct_0 X0) (u1_struct_0 \\ X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \\ X0) (u1_struct_0 X0)))))) \Rightarrow (r2_funct_2 (u1_struct_0 X0) (u1_struct_0 \\ X0) (k1_partfun1 (u1_struct_0 X0) (u1_struct_0 (k1_yellow_2 X0 \\ X0 X1)) (u1_struct_0 (k1_yellow_2 X0 X0 X1)) (u1_struct_0 X0) (k2_waybel_1 \\ X0 X0 X1) (k3_waybel_1 X0 X0 X1)) X1)) \end{aligned}$$