

t1_osalg_1 (TMSdnCzB- GabUF3Mk7LoErtXpEEQHTnUx7qw)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_relat_2 : \iota \Rightarrow o$ be given. Let $v4_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v3_relat_2 : \iota \Rightarrow o$ 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 $k3_finseq_2 : \iota \Rightarrow \iota$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $g3_osalg_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v11_struct_0 : \iota \Rightarrow o$ be given. Let $v3_orders_2 : \iota \Rightarrow o$ be given. Let $v4_orders_2 : \iota \Rightarrow o$ be given. Let $v5_orders_2 : \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $l1_orders_2 : \iota \Rightarrow o$ be given. Let $u1_orders_2 : \iota \Rightarrow \iota$ be given. Let $l5_struct_0 : \iota \Rightarrow o$ be given. Let $u4_struct_0 : \iota \Rightarrow \iota$ be given. Let $l3_osalg_1 : \iota \Rightarrow o$ be given. Let $l1_osalg_1 : \iota \Rightarrow o$ be given. Let $l2_osalg_1 : \iota \Rightarrow o$ be given. Let $l1_msualg_1 : \iota \Rightarrow o$ be given. Let $v3_osalg_1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r4_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r8_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_osalg_1 : \iota \Rightarrow \iota$ be given. Let $u1_msualg_1 : \iota \Rightarrow \iota$ be given. Let $u2_msualg_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k1_relat_1 X1 = X0) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0))) \wedge (((v3_relat_2 X3) \wedge ((v8_relat_2 X3) \wedge ((v1_partfun1 X3 X2) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 X2)))))) \wedge (((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X2 (k3_finseq_2 X0)) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X2 (k3_finseq_2 X0)))))) \wedge ((v1_funct_1 X5) \wedge ((v1_funct_2 X5 X2 X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X0))))))))) \Rightarrow \\ & (\forall X6. \forall X7. \forall X8. \forall X9. \forall X10. \forall X11. \\ & (g3_osalg_1 X0 X1 X2 X3 X4 X5 = g3_osalg_1 X6 X7 X8 X9 X10 X11) \Rightarrow ((X0 = X6) \wedge ((X1 = X7) \wedge ((X2 = X8) \wedge ((X3 = X9) \wedge ((X4 = X10) \wedge (X5 = X11)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.((v2_struct_0 X0)\wedge(l1_orders_2 X0))\Rightarrow(v1_xboole_0 (u1_orders_2 X0)) \quad (3)$$

Assume the following.

$$\forall X0.((v11_struct_0 X0)\wedge(l5_struct_0 X0))\Rightarrow(v1_xboole_0 (u4_struct_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l3_osalg_1 X0)\Rightarrow((l1_osalg_1 X0)\wedge(l2_osalg_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l2_osalg_1 X0)\Rightarrow((l1_msualg_1 X0)\wedge(l1_orders_2 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l1_msualg_1 X0)\Rightarrow(l5_struct_0 X0) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\ & ((m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))\wedge(((v3_relat_2 X3)\wedge((v8_relat_2 X3)\wedge((v1_partfun1 X3 X2)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X2 X2))))))\wedge(((v1_funct_1 X4)\wedge((v1_funct_2 X4 X2 (k3_finseq_2 X0))\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X2 (k3_finseq_2 X0))))))\wedge((v1_funct_1 X5)\wedge((v1_funct_2 X5 X2 X0)\wedge(m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X2 X0))))))\Rightarrow \\ & ((v3_osalg_1 (g3_osalg_1 X0 X1 X2 X3 X4 X5))\wedge(l3_osalg_1 (g3_osalg_1 X0 X1 X2 X3 X4 X5))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow((v1_relat_2 X0)\Leftrightarrow(r1_relat_2 X0 (k1_relat_1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v5_orders_2 X0)\Leftrightarrow(r4_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))) \quad (10)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v4_orders_2 X0)\Leftrightarrow(r8_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(l1_orders_2 X0)\Rightarrow((v3_orders_2 X0)\Leftrightarrow(r1_relat_2 (u1_orders_2 X0) (u1_struct_0 X0))) \quad (12)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v8_relat_2 X0) \Leftrightarrow (r8_relat_2 X0 (k1_relat_1 X0))) \quad (13)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v4_relat_2 X0) \Leftrightarrow (r4_relat_2 X0 (k1_relat_1 X0))) \quad (14)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (\\ (v4_relat_1 X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 X0)))) \Rightarrow (\\ (\neg v1_xboole_0 X1) \wedge ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge ((v1_funct_1 \\ X1) \wedge (v1_partfun1 X1 X0)))))) \end{aligned} \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_relat_1 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (v1_funct_1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(l3_osalg_1 X0) \Rightarrow ((v3_osalg_1 X0) \Rightarrow (X0 = g3_osalg_1 (u1_struct_0 X0) (u1_orders_2 X0) (u4_struct_0 X0) (u1_osalg_1 X0) (u1_msualg_1 X0) (u2_msualg_1 X0))) \quad (20)$$

Theorem 1

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow \\ (\forall X2.((v1_relat_2 X2) \wedge ((v4_relat_2 X2) \wedge ((v8_relat_2 \\ X2) \wedge ((v1_partfun1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ X0 X0)))))) \Rightarrow (\forall X3.((v3_relat_2 X3) \wedge ((v8_relat_2 X3) \wedge \\ ((v1_partfun1 X3 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 \\ X1 X1)))))) \Rightarrow (\forall X4.((v1_funct_1 X4) \wedge ((v1_funct_2 X4 X1 (\\ k3_finseq_2 X0) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 X1 \\ (k3_finseq_2 X0)))))) \Rightarrow (\forall X5.((v1_funct_1 X5) \wedge ((v1_funct_2 \\ X5 X1 X0) \wedge (m1_subset_1 X5 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))))) \Rightarrow \\ ((\neg v2_struct_0 (g3_osalg_1 X0 X2 X1 X3 X4 X5) \wedge ((\neg v11_struct_0 \\ (g3_osalg_1 X0 X2 X1 X3 X4 X5) \wedge ((v3_orders_2 (g3_osalg_1 X0 X2 X1 \\ X3 X4 X5) \wedge ((v4_orders_2 (g3_osalg_1 X0 X2 X1 X3 X4 X5) \wedge (v5_orders_2 \\ (g3_osalg_1 X0 X2 X1 X3 X4 X5)))))))))) \end{aligned}$$