

t49_modelc_2 (TMXuWzqso- QTmHj9NV6RGfcQ2hdV6HrobcD6)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v10_modelc_2 : \iota \Rightarrow o$ be given. Let $l1_modelc_2 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k15_modelc_2 : \iota$ be given. Let $u1_modelc_2 : \iota \Rightarrow \iota$ 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 $k9_modelc_2 : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r4_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_modelc_2 : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r5_modelc_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_finseq_1 : \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Assume the following.

$$\forall X0.((v1_modelc_2 X0) \wedge (m2_finseq_1 X0 k5_numbers)) \Leftrightarrow (X0 \in k9_modelc_2) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1_funct_1 X2) \wedge ((v1_funct_2 \\ & X2 X0 X1) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow \\ & (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 \\ & X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow ((\forall X4. (X4 \in X0) \Rightarrow \\ & (k1_funct_1 X2 X4 = k1_funct_1 X3 X4)) \Rightarrow (r2_relset_1 X0 X1 X2 X3))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (r1_xxreal_0 X0 X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((r2_relset_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1_funct_1 X2)\wedge((v1_funct_2 X2 X0 X1)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))\wedge((v1_funct_1 X3)\wedge((v1_funct_2 X3 X0 X1)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((r2_funct_2 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 X0)\wedge((\neg v1_xboole_0 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 X0))))\Rightarrow(\forall X2.(m2_subset_1 X2 X0 X1)\Leftrightarrow(m1_subset_1 X2 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2_finseq_1 X1 X0)\Leftrightarrow(m1_finseq_1 X1 X0) \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(\forall X1.((\neg v2_struct_0 X1)\wedge((v10_modelc_2 X1)\wedge(l1_modelc_2 X1)))\Rightarrow(\forall X2.((v1_funct_1 X2)\wedge((v1_funct_2 X2 k15_modelc_2 (u1_modelc_2 X1))\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k15_modelc_2 (u1_modelc_2 X1))))))\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 X3 k9_modelc_2 (u1_struct_0 X1))\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (u1_struct_0 X1))))))\Rightarrow(\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 k9_modelc_2 (u1_struct_0 X1))\wedge(m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k9_modelc_2 (u1_struct_0 X1))))))\Rightarrow(((r5_modelc_2 X1 X2 X3 X0)\wedge(r5_modelc_2 X1 X2 X4 X0))\Rightarrow(\forall X5.((v1_modelc_2 X5)\wedge(m2_finseq_1 X5 k5_numbers))\Rightarrow((r1_xreal_0 (k3_finseq_1 X5) X0)\Rightarrow(k1_funct_1 X3 X5 = k1_funct_1 X4 X5)))))))))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.((\neg v2_struct_0\ X1) \wedge \\ ((v10_modelc_2\ X1) \wedge (l1_modelc_2\ X1))) \Rightarrow (\forall X2.((v1_funct_1 \\ X2) \wedge ((v1_funct_2\ X2\ k15_modelc_2\ (u1_modelc_2\ X1)) \wedge (m1_subset_1 \\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k15_modelc_2\ (u1_modelc_2\ X1)))))) \Rightarrow \\ (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ k9_modelc_2\ (u1_struct_0 \\ X1)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k9_modelc_2\ (\\ u1_struct_0\ X1)))))) \Rightarrow ((r4_modelc_2\ X1\ X2\ X3) \Rightarrow (r5_modelc_2\ X1 \\ X2\ X3\ X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$(\neg v1_xboole_0\ k4_ordinal1) \wedge (v3_ordinal1\ k4_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(m1_finseq_1\ X1\ X0) \Rightarrow ((v1_relat_1\ X1) \wedge (\\ (v1_funct_1\ X1) \wedge (v1_finseq_1\ X1))) \quad (12)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.((v1_relat_1\ X0) \wedge ((v1_funct_1\ X0) \wedge (v1_finseq_1\ X0))) \Rightarrow \\ (m2_subset_1\ (k3_finseq_1\ X0)\ k1_numbers\ k5_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1) \Rightarrow (v7_ordinal1\ X0) \quad (15)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0) \Rightarrow (v1_xxreal_0\ X0) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1 \\ X0)) \Rightarrow (v1_xboole_0\ X1)) \quad (17)$$

Theorem 1

$$\begin{aligned} \forall X0.((\neg v2_struct_0\ X0) \wedge ((v10_modelc_2\ X0) \wedge (l1_modelc_2 \\ X0))) \Rightarrow (\forall X1.((v1_funct_1\ X1) \wedge ((v1_funct_2\ X1\ k15_modelc_2 \\ (u1_modelc_2\ X0)) \wedge (m1_subset_1\ X1\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ k15_modelc_2\ (u1_modelc_2\ X0)))))) \Rightarrow (\forall X2.((v1_funct_1 \\ X2) \wedge ((v1_funct_2\ X2\ k9_modelc_2\ (u1_struct_0\ X0)) \wedge (m1_subset_1 \\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k9_modelc_2\ (u1_struct_0\ X0)))))) \Rightarrow \\ (\forall X3.((v1_funct_1\ X3) \wedge ((v1_funct_2\ X3\ k9_modelc_2\ (u1_struct_0 \\ X0)) \wedge (m1_subset_1\ X3\ (k1_zfmisc_1\ (k2_zfmisc_1\ k9_modelc_2\ (\\ u1_struct_0\ X0)))))) \Rightarrow (((r4_modelc_2\ X0\ X1\ X2) \wedge (r4_modelc_2\ X0 \\ X1\ X3)) \Rightarrow (r2_funct_2\ k9_modelc_2\ (u1_struct_0\ X0)\ X2\ X3)))))) \end{aligned}$$