

t57_pzfmisc1 (TML-
SKA5UzyGFZoc3dmGiMmbFXRDUwixFxoH)

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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 $r6_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_pboole : \iota \Rightarrow \iota$ be given. Let $k6_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funcop_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarSKI : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(k2_zfmisc_1 X0 X1 = k1_xboole_0) \Leftrightarrow ((X0 = k1_xboole_0) \vee (X1 = k1_xboole_0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.k1_funct_1 (k1_pboole X1) X0 = k1_xboole_0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v1_relat_1 X1) \wedge ((v4_relat_1 \\ & X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 X0)))) \wedge ((v1_relat_1 \\ & X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))))) \Rightarrow \\ & ((r6_pboole X0 X1 X2) \Leftrightarrow (X1 = X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.k7_funcop_1 X0 X1 = k2_funcop_1 X0 X1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1_relat_1 (k2_funcop_1 X0 X1)) \wedge ((v4_relat_1 \\ & (k2_funcop_1 X0 X1) X0) \wedge ((v1_funct_1 (k2_funcop_1 X0 X1)) \wedge (v1_partfun1 \\ & (k2_funcop_1 X0 X1) X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 (k2_funcop_1 X0 X1)) \wedge (v1_funct_1 (k2_funcop_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.v4_relat_1 (k2_funcop_1 X0 X1) X0 \quad (7)$$

Assume the following.

$$\forall X0.k1_pboole X0 = k7_funcop_1 X0 k1_xboole_0 \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.k2_funcop_1 X0 X1 = k2_zfmisc_1 X0 (k1_tarSKI X1) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ & (v1_funct_1 X1)\wedge(v1_partfun1 X1 X0)))\Rightarrow(\forall X2.((v1_relat_1 \\ & X2)\wedge((v4_relat_1 X2 X0)\wedge((v1_funct_1 X2)\wedge(v1_partfun1 X2 X0))))\Rightarrow \\ & (\forall X3.((v1_relat_1 X3)\wedge((v4_relat_1 X3 X0)\wedge((v1_funct_1 \\ & X3)\wedge(v1_partfun1 X3 X0))))\Rightarrow((X3 = k6_pboole X0 X1 X2)\Leftrightarrow(\forall X4. \\ & (X4 \in X0)\Rightarrow(k1_funct_1 X3 X4 = k2_zfmisc_1 (k1_funct_1 X1 X4) (k1_funct_1 \\ & X2 X4)))))) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X1)\wedge((v4_relat_1 X1 X0)\wedge \\ & (v1_funct_1 X1)\wedge(v1_partfun1 X1 X0)))\Rightarrow(\forall X2.((v1_relat_1 \\ & X2)\wedge((v4_relat_1 X2 X0)\wedge((v1_funct_1 X2)\wedge(v1_partfun1 X2 X0))))\Rightarrow \\ & (((r6_pboole X0 X1 (k1_pboole X0))\vee(r6_pboole X0 X2 (k1_pboole \\ & X0)))\Rightarrow(r6_pboole X0 (k6_pboole X0 X1 X2) (k1_pboole X0)))) \end{aligned}$$