

t2_lattice2

(TMTD9ZPbTwq5Hf4qEc4E2FmG3peQgcdHBCY)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 X0)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (((k9_xtuple_0 X0 = k9_xtuple_0 X1) \wedge (\forall X2. (X2 \in k9_xtuple_0 X0) \Rightarrow (k1_funct_1 X0 X2 = k1_funct_1 X1 X2))) \Rightarrow (X0 = X1))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (\neg v1_xboole_0 X1) \Rightarrow (\forall X2. (m1_subset_1 X2 (k1_zfmisc_1 X0)) \Rightarrow (\forall X3. ((v1_funct_1 X3) \wedge ((v1_funct_2 X3 X0 X1) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k9_xtuple_0 (k2_partfun1 X0 X1 X3 X2) = X2))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.v1_relat_1 (k2_zfmisc_1 X0 X1) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 \\ & (k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) \\ & (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_relat_1 X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1_xboole_0 X1)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 X0))\Rightarrow(\forall X3.((v1_funct_1 X3)\wedge((v1_funct_2 \\ & X3 X0 X1)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow \\ & (\forall X4.((v1_funct_1 X4)\wedge((v1_funct_2 X4 X0 X1)\wedge(m1_subset_1 \\ & X4 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))))\Rightarrow((k2_partfun1 X0 X1 X3 \\ & X2 = k2_partfun1 X0 X1 X4 X2)\Leftrightarrow(\forall X5.(m1_subset_1 X5 X0)\Rightarrow((\\ & X5 \in X2)\Rightarrow(k1_funct_1 X4 X5 = k1_funct_1 X3 X5)))))) \end{aligned}$$