

l78_normform (TMFkEjBG- WWbP6MfkCxdAn4H84D6myaswed4)

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Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_finsub_1 : \iota \Rightarrow \iota$ be given. Let $k7_normform : \iota \Rightarrow \iota$ be given. Let $k8_normform : \iota \Rightarrow \iota$ be given. Let $k1_binop_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u2_lattices : \iota \Rightarrow \iota$ be given. Let $k12_normform : \iota \Rightarrow \iota$ be given. Let $u1_lattices : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_normform : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_normform : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v3_lattices : \iota \Rightarrow o$ be given. Let $l3_lattices : \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1_subset_1 X1 (k5_finsub_1 (k7_normform \\ & X0))) \Rightarrow (\forall X2. (m1_subset_1 X2 (k5_finsub_1 (k7_normform \\ & X0))) \Rightarrow (k9_normform X0 (k5_setwiseo (k7_normform X0) (k9_normform \\ & X0 X1) X2) = k9_normform X0 (k5_setwiseo (k7_normform X0) X1 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (m2_subset_1 X1 (k5_finsub_1 (k7_normform X0)) (k8_normform X0)) \Rightarrow (k9_normform X0 X1 = X1) \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2_subset_1 X1 (k5_finsub_1 (k7_normform \\ & X0)) (k8_normform X0)) \Rightarrow (\forall X2. (m2_subset_1 X2 (k5_finsub_1 \\ & (k7_normform X0)) (k8_normform X0)) \Rightarrow (k9_normform X0 (k5_setwiseo \\ & (k7_normform X0) (k10_normform X0 X1 X2) X2) = k9_normform X0 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k8_normform X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(m1_subset_1 X1 (k5_finsub_1 (k7_normform X0)))\Rightarrow(m2_subset_1 (k9_normform X0 X1) (k5_finsub_1 (k7_normform X0)) (k8_normform X0)) \quad (6)$$

Assume the following.

$$\forall X0.m1_subset_1 (k8_normform X0) (k1_zfmisc_1 (k5_finsub_1 (k7_normform X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v3_lattices (k12_normform X0))\wedge(l3_lattices (k12_normform X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1_subset_1 X1 (k5_finsub_1 (k7_normform X0)))\wedge(m1_subset_1 X2 (k5_finsub_1 (k7_normform X0))))\Rightarrow(m1_subset_1 (k10_normform X0 X1 X2) (k5_finsub_1 (k7_normform X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v3_lattices X1)\wedge(l3_lattices X1))\Rightarrow((X1 = k12_normform X0)\Leftrightarrow((u1_struct_0 X1 = k8_normform X0)\wedge(\forall X2.(m2_subset_1 X2 (k5_finsub_1 (k7_normform X0)) (k8_normform X0))\Rightarrow(\forall X3.(m2_subset_1 X3 (k5_finsub_1 (k7_normform X0)) (k8_normform X0))\Rightarrow((k1_binop_1 (u2_lattices X1) X2 X3 = k9_normform X0 (k5_setwiseo (k7_normform X0) X2 X3))\wedge(k1_binop_1 (u1_lattices X1) X2 X3 = k9_normform X0 (k10_normform X0 X2 X3)))))))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (11)$$

Theorem 1

$$\forall X0.\forall X1.(m2_subset_1 X1 (k5_finsub_1 (k7_normform X0)) (k8_normform X0))\Rightarrow(\forall X2.(m2_subset_1 X2 (k5_finsub_1 (k7_normform X0)) (k8_normform X0))\Rightarrow(k1_binop_1 (u2_lattices (k12_normform X0)) (k1_binop_1 (u1_lattices (k12_normform X0)) X1 X2) X2 = X2))$$