

t68_ideal_1 (TMcyexEXhTmAC- tjnER62856ZfoURWgEPKaK)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k7_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_ideal_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (m1_subset_1 X0 (k1_zfmisc_1 X1)) \Leftrightarrow (r1_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k7_domain_1 X0 X1 X2 = k2_tarski X1 X2) \quad (3)$$

Assume the following.

$$\forall X0. \neg v1_xboole_0 (k1_zfmisc_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((\neg v1_xboole_0 (k7_ideal_1 X0 X1)) \wedge ((v1_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge ((v2_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge ((v3_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge (m1_subset_1 (k7_ideal_1 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0)))))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0)\wedge((m1_subset_1 X1 X0)\wedge(m1_subset_1 X2 X0)))\Rightarrow(m1_subset_1 (k7_domain_1 X0 X1 X2) (k1_zfmisc_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow (X2 \in X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2_tarski X0 X1)\Leftrightarrow(\forall X3. (X3 \in X2)\Leftrightarrow((X3 = X0)\vee(X3 = X1))) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Leftrightarrow(\forall X1.\neg X1 \in X0) \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge(l6_algstr_0 X0))\Rightarrow(\forall X1. \\ &(m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))\Rightarrow((\neg v1_xboole_0 \\ &X1)\Rightarrow(\forall X2.((\neg v1_xboole_0 X2)\wedge((v1_ideal_1 X2 X0)\wedge((v2_ideal_1 \\ &X2 X0)\wedge((v3_ideal_1 X2 X0)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 \\ &X0))))))\Rightarrow((X2 = k7_ideal_1 X0 X1)\Leftrightarrow((r1_tarski X1 X2)\wedge(\forall X3. \\ &((\neg v1_xboole_0 X3)\wedge((v1_ideal_1 X3 X0)\wedge((v2_ideal_1 X3 X0)\wedge \\ &(v3_ideal_1 X3 X0)\wedge(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ &X0))))))\Rightarrow((r1_tarski X1 X3)\Rightarrow(r1_tarski X2 X3))))))))) \quad (10) \end{aligned}$$

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

$$\begin{aligned} &\forall X0.((\neg v2_struct_0 X0)\wedge(l6_algstr_0 X0))\Rightarrow(\forall X1. \\ &(m1_subset_1 X1 (u1_struct_0 X0))\Rightarrow(\forall X2.(m1_subset_1 X2 \\ &(u1_struct_0 X0))\Rightarrow((X1 \in k7_ideal_1 X0 (k7_domain_1 (u1_struct_0 \\ &X0) X1 X2))\wedge(X2 \in k7_ideal_1 X0 (k7_domain_1 (u1_struct_0 X0) X1 \\ &X2)))))) \end{aligned}$$