

t5_quofield

(TMQfacXVoTcQRvpS3xC33pN3rrY7Tghx77y)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v6_struct_0 : \iota \Rightarrow o$ be given. Let $v5_group_1 : \iota \Rightarrow o$ be given. Let $l5_algstr_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k1_quofield : \iota \Rightarrow \iota$ be given. Let $k6_quofield : \iota \Rightarrow \iota \Rightarrow \iota$ be given. 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 $l3_algstr_0 : \iota \Rightarrow o$ be given. Let $k8_group_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_algstr_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $l4_algstr_0 : \iota \Rightarrow o$ be given. Let $l4_struct_0 : \iota \Rightarrow o$ be given. Let $l2_struct_0 : \iota \Rightarrow o$ be given. Let $l3_struct_0 : \iota \Rightarrow o$ be given. Let $k3_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2_struct_0 X0) \wedge ((v5_group_1 \\ & X0) \wedge (l3_algstr_0 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge \\ & (m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k8_group_1 X0 X1 X2 = k6_algstr_0 \\ & X0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge (l5_algstr_0 X0))) \Rightarrow (\neg v1_xboole_0 (k1_quofield X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 X0 X1) \Rightarrow (m1_subset_1 X2 X0)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. (l5_algstr_0 X0) \Rightarrow ((l4_algstr_0 X0) \wedge (l4_struct_0 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(l4_struct_0 X0) \Rightarrow ((l2_struct_0 X0) \wedge (l3_struct_0 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(l4_algstr_0 X0) \Rightarrow ((l3_struct_0 X0) \wedge (l3_algstr_0 X0)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge \\ & (l5_algstr_0 X0))) \wedge (m1_subset_1 X1 (k1_quofield X0))) \Rightarrow (m1_subset_1 \\ & (k6_quofield X0 X1) (k1_zfmisc_1 (k1_quofield X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\ & X1) \wedge (m1_subset_1 X2 (k2_zfmisc_1 X0 X1)))) \Rightarrow (m1_subset_1 (k3_domain_1 \\ & X0 X1 X2) X1) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 \\ & X1) \wedge (m1_subset_1 X2 (k2_zfmisc_1 X0 X1)))) \Rightarrow (m1_subset_1 (k2_domain_1 \\ & X0 X1 X2) X0) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge (l2_struct_0 X0)) \Rightarrow (m1_subset_1 \\ & (k1_quofield X0) (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 X0) (\\ & u1_struct_0 X0)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2_struct_0 X0) \wedge ((\neg v6_struct_0 X0) \wedge (l5_algstr_0 \\ & X0))) \Rightarrow (\forall X1.(m2_subset_1 X1 (k2_zfmisc_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0)) (k1_quofield X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k1_zfmisc_1 (k1_quofield X0)) \Rightarrow ((X2 = k6_quofield X0 X1) \Leftrightarrow (\\ & \forall X3.(m2_subset_1 X3 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0)) (k1_quofield X0)) \Rightarrow ((X3 \in X2) \Leftrightarrow (k6_algstr_0 X0 (k2_domain_1 \\ & (u1_struct_0 X0) (u1_struct_0 X0) X3) (k3_domain_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X1) = k6_algstr_0 X0 (k3_domain_1 (u1_struct_0 \\ & X0) (u1_struct_0 X0) X3) (k2_domain_1 (u1_struct_0 X0) (u1_struct_0 \\ & X0) X1)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2_struct_0 X0) \wedge ((v5_group_1 \\ & X0) \wedge (l3_algstr_0 X0))) \wedge ((m1_subset_1 X1 (u1_struct_0 X0)) \wedge (\\ & m1_subset_1 X2 (u1_struct_0 X0)))) \Rightarrow (k8_group_1 X0 X1 X2 = k8_group_1 \\ & X0 X2 X1) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.(v1_xboole_0 X0)\Rightarrow(\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X1 X0)))\Rightarrow(v1_xboole_0 X2)) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0)\Rightarrow(\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 X0))\Rightarrow(v1_xboole_0 X1)) \quad (15)$$

Theorem 1

$$\forall X0.((\neg v2_struct_0 X0)\wedge((\neg v6_struct_0 X0)\wedge((v5_group_1 X0)\wedge(l5_algstr_0 X0))))\Rightarrow(\forall X1.(m2_subset_1 X1 (k2_zfmisc_1 (u1_struct_0 X0) (u1_struct_0 X0)) (k1_quofield X0))\Rightarrow(X1 \in k6_quofield X0 X1))$$