

t57_ideal_1

(TMHGR3xkbQmLyfRavje9g3hi6xfDrdYRmyz)

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Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $l6_algstr_0 : \iota \Rightarrow o$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_ideal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((\neg v1_xboole_0 (k7_ideal_1 X0 X1)) \wedge ((v1_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge ((v2_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge ((v3_ideal_1 (k7_ideal_1 X0 X1) X0) \wedge (m1_subset_1 (k7_ideal_1 X0 X1) (k1_zfmisc_1 (u1_struct_0 X0)))))))) \quad (2)$$

Assume the following.

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0))) \Rightarrow ((\neg v1_xboole_0 X1) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge ((v1_ideal_1 X2 X0) \wedge ((v2_ideal_1 X2 X0) \wedge ((v3_ideal_1 X2 X0) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))))))) \Rightarrow ((X2 = k7_ideal_1 X0 X1) \Leftrightarrow ((r1_tarski X1 X2) \wedge (\forall X3. ((\neg v1_xboole_0 X3) \wedge ((v1_ideal_1 X3 X0) \wedge ((v2_ideal_1 X3 X0) \wedge ((v3_ideal_1 X3 X0) \wedge (m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 X0)))))))) \Rightarrow ((r1_tarski X1 X3) \Rightarrow (r1_tarski X2 X3)))))) \quad (3)$$

Theorem 1

$$\forall X0. ((\neg v2_struct_0 X0) \wedge (l6_algstr_0 X0)) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow (\forall X2. ((\neg v1_xboole_0 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 X0)))) \Rightarrow ((r1_tarski X1 X2) \Rightarrow (r1_tarski (k7_ideal_1 X0 X1) (k7_ideal_1 X0 X2))))))$$