

## t58\_ideal\_1

(TMJjC2SvtKBQUZj4TyCdStAFU9bU62mRXvR)

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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  $k8\_ideal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_ideal\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_ideal\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. 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.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \Rightarrow ((\neg v1\_xboole\_0 \\ & (k8\_ideal\_1 X0 X1)) \wedge ((v1\_ideal\_1 (k8\_ideal\_1 X0 X1) X0) \wedge ((v2\_ideal\_1 \\ & (k8\_ideal\_1 X0 X1) X0) \wedge (m1\_subset\_1 (k8\_ideal\_1 X0 X1) (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((\neg v1\_xboole\_0 \\ & X1) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 X2) \wedge ((v1\_ideal\_1 X2 X0) \wedge ((v2\_ideal\_1 \\ & X2 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (( \\ & X2 = k8\_ideal\_1 X0 X1) \Leftrightarrow ((r1\_tarski X1 X2) \wedge (\forall X3. ((\neg v1\_xboole\_0 \\ & X3) \wedge ((v1\_ideal\_1 X3 X0) \wedge ((v2\_ideal\_1 X3 X0) \wedge (m1\_subset\_1 X3 ( \\ & k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow ((r1\_tarski X1 X3) \Rightarrow (r1\_tarski \\ & X2 X3)))))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k8\_ideal\_1 \\ & X0 X1) (k8\_ideal\_1 X0 X2)))) \end{aligned}$$