

## t67\_ideal\_1

(TMcqS2inxYN7eaxhinmsW3CFGhnP8ZJKNSa)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_algstr\_1 : \iota \Rightarrow o$  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  $k7\_ideal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow ((r1\_tarski X1 X2) \Rightarrow (r1\_tarski (k7\_ideal\_1 \\ & X0 X1) (k7\_ideal\_1 X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge ((v1\_ideal\_1 X1 X0) \wedge ((v2\_ideal\_1 X1 X0) \wedge \\ & (v3\_ideal\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))))) \Rightarrow (k7\_ideal\_1 X0 X1 = X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski (k1\_tarski X0) X1) \Leftrightarrow (X0 \in X1) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow ((\neg v1\_xboole\_0 \\ & (u1\_struct\_0 X0)) \wedge ((v1\_ideal\_1 (u1\_struct\_0 X0) X0) \wedge ((v2\_ideal\_1 \\ & (u1\_struct\_0 X0) X0) \wedge (m1\_subset\_1 (u1\_struct\_0 X0) (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \quad (5)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k1\_tarski X0) \quad (6)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge(l6\_algstr\_0 X0))\wedge \\ &(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow((\neg v1\_xboole\_0 \\ &(k7\_ideal\_1 X0 X1))\wedge((v1\_ideal\_1 (k7\_ideal\_1 X0 X1) X0)\wedge((v2\_ideal\_1 \\ &(k7\_ideal\_1 X0 X1) X0)\wedge((v3\_ideal\_1 (k7\_ideal\_1 X0 X1) X0)\wedge(m1\_subset\_1 \\ &(k7\_ideal\_1 X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 X0))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge(m1\_subset\_1 X1 X0))\Rightarrow (m1\_subset\_1 (k6\_domain\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (8)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((\neg v2\_struct\_0 X0)\wedge((v13\_algstr\_0 X0)\wedge((v2\_rlvect\_1 \\ &X0)\wedge((v3\_rlvect\_1 X0)\wedge((v4\_rlvect\_1 X0)\wedge((v3\_group\_1 X0)\wedge( \\ &(v5\_group\_1 X0)\wedge((v4\_vectsp\_1 X0)\wedge((v5\_vectsp\_1 X0)\wedge((v1\_algstr\_1 \\ &X0)\wedge(l6\_algstr\_0 X0))))))))))\Rightarrow(\forall X1.((\neg v1\_xboole\_0 \\ &X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow(\forall X2. \\ &(m1\_subset\_1 X2 (u1\_struct\_0 X0))\Rightarrow((X2 \in k7\_ideal\_1 X0 X1)\Rightarrow(r1\_tarski \\ &(k7\_ideal\_1 X0 (k6\_domain\_1 (u1\_struct\_0 X0) X2)) (k7\_ideal\_1 \\ &X0 X1)))))) \end{aligned}$$