

## t7\_ideal\_1

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v4\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v2\_algstr\_1 : \iota \Rightarrow o$  be given. Let  $v3\_algstr\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge ((v4\_rlvect\_1 \\ X0) \wedge ((v2\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (v3\_ideal\_1 (k6\_domain\_1 \\ (u1\_struct\_0 X0) (k4\_struct\_0 X0)) X0) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v6\_algstr\_0 X0) \wedge ((v1\_vectsp\_1 \\ X0) \wedge ((v1\_algstr\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (v2\_ideal\_1 (k6\_domain\_1 \\ (u1\_struct\_0 X0) (k4\_struct\_0 X0)) X0) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (k6\_domain\_1 X0 X1 = k1\_tarski X1) \tag{3}$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k1\_tarski X0) \tag{4}$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \tag{5}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l2\_algstr\_0 X0))) \Rightarrow (v1\_ideal\_1 (k1\_tarski (k4\_struct\_0 X0)) X0) \quad (6)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (7)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k6\_domain\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (m1\_subset\_1 (k4\_struct\_0 X0) (u1\_struct\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0)))) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v1\_algstr\_1 X0) \wedge (v4\_algstr\_1 X0)))) \quad (12)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v5\_vectsp\_1 X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v1\_vectsp\_1 X0) \wedge (v2\_vectsp\_1 X0)))) \quad (13)$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v4\_algstr\_1 X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v5\_algstr\_0 X0) \wedge ((v6\_algstr\_0 X0) \wedge ((v2\_algstr\_1 X0) \wedge (v3\_algstr\_1 X0)))))) \quad (14)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow ((\neg v1\_xboole\_0 (k6\_domain\_1 (u1\_struct\_0 X0) (k4\_struct\_0 X0))) \wedge ((v1\_ideal\_1 (k6\_domain\_1 (u1\_struct\_0 X0) (k4\_struct\_0 X0)) X0) \wedge ((v2\_ideal\_1 (k6\_domain\_1 (u1\_struct\_0 X0) (k4\_struct\_0 X0)) X0) \wedge ((v3\_ideal\_1 (k6\_domain\_1 (u1\_struct\_0 X0) (k4\_struct\_0 X0)) X0) \wedge (m1\_subset\_1 (k6\_domain\_1 (u1\_struct\_0 X0) (k4\_struct\_0 X0)) (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))))$$