

## t10\_c0sp1

(TMcoSmBkL8wj7zSdsLGxameLvyY2Y1tRbEH)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_c0sp1 : \iota \Rightarrow \iota$  be given. Let  $k12\_funcsdom : \iota \Rightarrow \iota$  be given. 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  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funcsdom : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v1\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v3\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_funcsdom : \iota \Rightarrow o$  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  $v4\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_funcsdom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_c0sp1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funcsdom : \iota \Rightarrow o$  be given. Let  $k6\_c0sp1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v2\_funcsdom X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v1\_vectsp\_1 X0) \wedge ((v3\_vectsp\_1 X0) \wedge ( \\ & l1\_funcsdom X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (((v4\_c0sp1 X1 X0) \wedge (v3\_c0sp1 X1 X0)) \Rightarrow ((v1\_xboole\_0 X1) \vee (m2\_c0sp1 (g1\_funcsdom X1 (k2\_c0sp1 X0 X1) (k1\_c0sp1 X0 X1) \\ & (k5\_c0sp1 X0 X1) (k4\_c0sp1 X0 X1) (k3\_c0sp1 X0 X1)) X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v13\_algstr\_0 (k12\_funcsdom X0) \wedge ((v3\_group\_1 (k12\_funcsdom X0) \wedge ((v5\_group\_1 (k12\_funcsdom X0) \wedge ((v1\_vectsp\_1 (k12\_funcsdom X0) \wedge ((v3\_vectsp\_1 (k12\_funcsdom X0) \wedge ((v2\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v3\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v4\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v5\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v6\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v7\_rlvect\_1 (k12\_funcsdom X0) \wedge ((v1\_funcsdom (k12\_funcsdom X0) \wedge (v2\_funcsdom (k12\_funcsdom X0)))))))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(\neg v2\_struct\_0 (k12\_funcsdom X0)) \wedge (v1\_funcsdom (k12\_funcsdom X0)) \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((\neg v1\_xboole\_0 (k6\_c0sp1 X0)) \wedge ((v3\_c0sp1 (k6\_c0sp1 X0) (k12\_funcsdom X0)) \wedge (v4\_c0sp1 (k6\_c0sp1 X0) (k12\_funcsdom X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((\neg v1\_xboole\_0 (k6\_c0sp1 X0)) \wedge (m1\_subset\_1 (k6\_c0sp1 X0) (k1\_zfmisc\_1 (u1\_struct\_0 (k12\_funcsdom X0))))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_funcsdom (k12\_funcsdom X0)) \wedge (l1\_funcsdom (k12\_funcsdom X0)) \quad (6)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (k7\_c0sp1 X0 = g1\_funcsdom (k6\_c0sp1 X0) (k2\_c0sp1 (k12\_funcsdom X0) (k6\_c0sp1 X0)) (k1\_c0sp1 (k12\_funcsdom X0) (k6\_c0sp1 X0)) (k5\_c0sp1 (k12\_funcsdom X0) (k6\_c0sp1 X0)) (k4\_c0sp1 (k12\_funcsdom X0) (k6\_c0sp1 X0)) (k3\_c0sp1 (k12\_funcsdom X0) (k6\_c0sp1 X0))) \quad (7)$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (m2\_c0sp1 (k7\_c0sp1 X0) (k12\_funcsdom X0))$$