

# t34\_mathmorp (TMWGQUrTqWTgm- rmh3JEFwNhyHiv3GA3uk3a)

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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  $l1\_rlvect\_1 : \iota \Rightarrow o$  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  $k6\_rusub\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X0 X2)) \Rightarrow (r1\_tarski X0 (k3\_xboole\_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski (k3\_xboole\_0 X0 X1) X0 \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3. \\ (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((r1\_tarski \\ X1 X2) \Rightarrow (r1\_tarski (k6\_rusub\_4 X0 X1 X3) (k6\_rusub\_4 X0 X2 X3)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (k9\_subset\_1 X0 X1 X2 = k3\_xboole\_0 X1 X2) \quad (4)$$

Assume the following.

$$\forall X0. (l1\_rlvect\_1 X0) \Rightarrow (l2\_algstr\_0 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow (m1\_subset\_1 (k9\_subset\_1 X0 X1 X2) (k1\_zfmisc\_1 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 \\ & X0)) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow (m1\_subset\_1 (k6\_rusub\_4 \\ & X0 X1 X2) (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 X0)))))) \Rightarrow \\ & (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & (\forall X3. (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ & (r1\_tarski (k6\_rusub\_4 X0 (k9\_subset\_1 (u1\_struct\_0 X0) X1 X2) \\ & X3) (k9\_subset\_1 (u1\_struct\_0 X0) (k6\_rusub\_4 X0 X1 X3) (k6\_rusub\_4 \\ & X0 X2 X3)))))) \end{aligned}$$