

t41\_mathmorp  
(TMFeFpFpt74aKd4BaCZY9nPkJhGz37KsGcz)

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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  $k4\_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_rusub\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 X0)))))) \Rightarrow \\ &(\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ &(\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ &(r1\_tarski X1 (k3\_mathmorp X0 (k6\_rusub\_4 X0 X1 X2) X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 X0)))))) \Rightarrow \\ &(\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ &(\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ &(r1\_tarski (k6\_rusub\_4 X0 (k3\_mathmorp X0 X1 X2) X2) X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (l1\_rlvect\_1 X0) \Rightarrow (l2\_algstr\_0 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ &(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\ &(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k5\_mathmorp \\ &X0 X1 X2 = k3\_mathmorp X0 (k6\_rusub\_4 X0 X1 X2) X2))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l2\_algstr\_0 X0)) \Rightarrow (\forall X1. \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (k4\_mathmorp \\
& X0 X1 X2 = k6\_rusub\_4 X0 (k3\_mathmorp X0 X1 X2) X2))) \tag{5}
\end{aligned}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 X0))))) \Rightarrow \\
& (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\
& ((r1\_tarski (k4\_mathmorp X0 X1 X2) X1) \wedge (r1\_tarski X1 (k5\_mathmorp \\
& X0 X1 X2))))))
\end{aligned}$$