

## t13\_vectsp\_2

(TMWWsVfrFn8E6oJYenkRUDNBt2rW1u9XSDN)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v33\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k11\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge \\ & ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 \\ & X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 \\ & (u1\_struct\_0 X0)) \Rightarrow ((X1 \neq k4\_struct\_0 X0) \Rightarrow ((k6\_algstr\_0 X0 X1 ( \\ & k11\_algstr\_0 X0 X1) = k5\_struct\_0 X0) \wedge (k6\_algstr\_0 X0 (k11\_algstr\_0 \\ & X0 X1) X1 = k5\_struct\_0 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge \\ & ((v5\_vectsp\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (\neg (X1 \neq k4\_struct\_0 X0) \wedge (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)) \Rightarrow (k6\_algstr\_0 X0 X1 X2 \neq k5\_struct\_0 X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge \\ & (l6\_algstr\_0 X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((k6\_algstr\_0 \\ & X0 X1 X2 = k5\_struct\_0 X0) \Rightarrow ((X1 \neq k4\_struct\_0 X0) \wedge (X2 \neq k4\_struct\_0 \\ & X0)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge (v3\_group\_1 X0) \wedge (v4\_vectsp\_1 X0) \wedge \\
& ((v5\_vectsp\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 \\
& X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
& ((X1 \neq k4\_struct\_0 X0) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
& X0)) \Rightarrow ((X2 = k11\_algstr\_0 X0 X1) \Leftrightarrow (k6\_algstr\_0 X0 X2 X1 = k5\_struct\_0 \\
& X0))))))
\end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge (v3\_group\_1 X0) \wedge (v4\_vectsp\_1 X0) \wedge \\
& ((v5\_vectsp\_1 X0) \wedge (v2\_rlvect\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 \\
& X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 \\
& (u1\_struct\_0 X0)) \Rightarrow (\neg (X1 \neq k4\_struct\_0 X0) \wedge (k11\_algstr\_0 X0 X1 = \\
& k4\_struct\_0 X0)))
\end{aligned}$$