

# t81\_vectsp\_4 (TMMRovQU- Cavw7hYUhkdtnnWPSM2t4US4VBE)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  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  $v8\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v9\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v10\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_vectsp\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_vectsp\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_vectsp\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge \\
& ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v8\_vectsp\_1 \\
& X1 X0) \wedge ((v9\_vectsp\_1 X1 X0) \wedge ((v10\_vectsp\_1 X1 X0) \wedge ((v11\_vectsp\_1 \\
& X1 X0) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& (l1\_vectsp\_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
& X1)) \Rightarrow (\forall X3.(m1\_vectsp\_4 X3 X0 X1) \Rightarrow (\forall X4.(m2\_vectsp\_4 \\
& X4 X0 X1 X3) \Rightarrow ((X2 \in X4) \Leftrightarrow (X4 = k3\_vectsp\_4 X0 X1 X2 X3))))))
\end{aligned} \tag{1}$$

## Theorem 1

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v3\_group\_1 \\
& X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge ((v2\_rlvect\_1 X0) \wedge \\
& ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow \\
& (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v8\_vectsp\_1 \\
& X1 X0) \wedge ((v9\_vectsp\_1 X1 X0) \wedge ((v10\_vectsp\_1 X1 X0) \wedge ((v11\_vectsp\_1 \\
& X1 X0) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& (l1\_vectsp\_1 X1 X0)))))))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
& X1)) \Rightarrow (\forall X3.(m1\_vectsp\_4 X3 X0 X1) \Rightarrow (\forall X4.(m2\_vectsp\_4 \\
& X4 X0 X1 X3) \Rightarrow (\forall X5.(m2\_vectsp\_4 X5 X0 X1 X3) \Rightarrow (((X2 \in X4) \wedge (X2 \in \\
& X5)) \Rightarrow (X4 = X5))))))
\end{aligned}$$