

t9\_ec\_pf\_2 (TM-  
MoU8zYcZXc2cXTAH2wtDrwST5hiCvgFvE)

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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  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge \\
& ((v4\_rlvect\_1 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 \\
& X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))))) \Rightarrow (\forall X1. \\
& (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 \\
& X5 (u1\_struct\_0 X0)) \Rightarrow ((k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 \\
& X0 X1 X2) X3) X4 = k3\_rlvect\_1 X0 X1 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 \\
& X2 X3) X4)) \wedge (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 \\
& X0 X1 X2) X3) X4) X5 = k3\_rlvect\_1 X0 X1 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 \\
& X0 (k3\_rlvect\_1 X0 X2 X3) X4) X5))))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \tag{2}$$

Assume the following.

$$\forall X0. (l2\_algstr\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l1\_algstr\_0 X0)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v2\_rlvect\_1 X0) \wedge (l1\_algstr\_0 \\ & X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)))) \Rightarrow (m1\_subset\_1 (k3\_rlvect\_1 X0 X1 X2) (u1\_struct\_0 X0)) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. (((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\ & X0) \wedge (v33\_algstr\_0 X0) \wedge (v2\_rlvect\_1 X0) \wedge (v3\_rlvect\_1 X0) \wedge \\ & ((v4\_rlvect\_1 X0) \wedge (v3\_group\_1 X0) \wedge (v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 \\ & X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))))) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 \\ & X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6. (m1\_subset\_1 X6 (u1\_struct\_0 \\ & X0)) \Rightarrow (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 \\ & X0 (k3\_rlvect\_1 X0 X1 X2) X3) X4) X5) X6 = k3\_rlvect\_1 X0 X1 (k3\_rlvect\_1 \\ & X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 (k3\_rlvect\_1 X0 X2 X3) X4) X5) \\ & X6)))))))))) \end{aligned}$$