

t70\_fvaluat1  
(TMFUdkb5YJrhQhHxT1UrNscHyNiGe1rJ9yE)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. 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  $v3\_group\_1 : \iota \Rightarrow o$  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  $v1\_realset2 : \iota \Rightarrow o$  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  $m1\_fvaluat1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_fvaluat1 : \iota \Rightarrow o$  be given. Let  $k7\_fvaluat1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l4\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v36\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ ((\neg v6\_struct\_0 X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v3\_group\_1 X1) \wedge ((v5\_vectsp\_1 \\ X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\ ((v1\_realset2 X1) \wedge (l6\_algstr\_0 X1)))))))))) \Rightarrow (\forall X2.(m1\_fvaluat1 \\ X2 X1) \Rightarrow ((v3\_fvaluat1 X1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ (k7\_fvaluat1 X1 X2)) \Rightarrow (k1\_binop\_1 (k4\_group\_1 X1) X3 X0 = k1\_binop\_1 \\ (k4\_group\_1 (k7\_fvaluat1 X1 X2)) X3 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow \\ (m1\_subset\_1 (k1\_binop\_1 (k4\_group\_1 X0) X1 X2) (u1\_struct\_0 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0) \Rightarrow ((l4\_algstr\_0 X0) \wedge (l4\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0) \Rightarrow ((l3\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (\neg v6\_struct\_0 X0) \wedge \\ & ((v13\_algstr\_0 X0) \wedge (v3\_group\_1 X0) \wedge (v5\_vectsp\_1 X0) \wedge (v2\_rlvect\_1 \\ & X0) \wedge (v3\_rlvect\_1 X0) \wedge (v4\_rlvect\_1 X0) \wedge (v1\_realset2 X0) \wedge \\ & (l6\_algstr\_0 X0)))))) \wedge (m1\_fvaluat1 X1 X0) \Rightarrow ((\neg v2\_struct\_0 \\ & (k7\_fvaluat1 X0 X1)) \wedge (\neg v6\_struct\_0 (k7\_fvaluat1 X0 X1)) \wedge ((v13\_algstr\_0 \\ & (k7\_fvaluat1 X0 X1)) \wedge (v36\_algstr\_0 (k7\_fvaluat1 X0 X1)) \wedge (v3\_group\_1 \\ & (k7\_fvaluat1 X0 X1)) \wedge (v5\_group\_1 (k7\_fvaluat1 X0 X1)) \wedge (v4\_vectsp\_1 \\ & (k7\_fvaluat1 X0 X1)) \wedge (v5\_vectsp\_1 (k7\_fvaluat1 X0 X1)) \wedge (v2\_rlvect\_1 \\ & (k7\_fvaluat1 X0 X1)) \wedge (v3\_rlvect\_1 (k7\_fvaluat1 X0 X1)) \wedge (v4\_rlvect\_1 \\ & (k7\_fvaluat1 X0 X1)) \wedge (l6\_algstr\_0 (k7\_fvaluat1 X0 X1)))))) \end{aligned} \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge \\ & ((\neg v6\_struct\_0 X1) \wedge (v13\_algstr\_0 X1) \wedge (v3\_group\_1 X1) \wedge (v5\_vectsp\_1 \\ & X1) \wedge (v2\_rlvect\_1 X1) \wedge (v3\_rlvect\_1 X1) \wedge (v4\_rlvect\_1 X1) \wedge \\ & (v1\_realset2 X1) \wedge (l6\_algstr\_0 X1)))))) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3.(m1\_fvaluat1 X3 X1) \Rightarrow (((v3\_fvaluat1 \\ & X1) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 (k7\_fvaluat1 X1 X3))) \Rightarrow (m1\_subset\_1 \\ & (k1\_binop\_1 (k4\_group\_1 X1) X2 X0) (u1\_struct\_0 (k7\_fvaluat1 X1 \\ & X3)))))) \end{aligned}$$