

t76\_semi\_af1

(TMHaWk8zDe522ja8vEUtH3uicKxt7CEzd9r)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_semi\_af1 : \iota \Rightarrow o$  be given. Let  $l1\_analoaf : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_semi\_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_semi\_af1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (v1\_semi\_af1 X0) \wedge (l1\_analoaf X0)) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k2\_semi\_af1 X0 X1 X2) (u1\_struct\_0 X0))) \quad (1)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (v1\_semi\_af1 X0) \wedge (l1\_analoaf X0)) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow ((X3 = k2\_semi\_af1 X0 X1 X2) \Leftrightarrow (k1\_semi\_af1 X0 X1 X3 X2 = X2)))))) \quad (2)$$

**Theorem 1**

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (v1\_semi\_af1 X0) \wedge (l1\_analoaf X0)) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\exists X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \wedge (k1\_semi\_af1 X0 X1 X3 X2 = X2))))))$$