t67_semi_af1 (TMJAgFS-GoF13Kh7SCS2JCZWxV8ANstACZwp)

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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 $r3\_semi\_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2\_semi\_af1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v1\_semi\_af1\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow ((r2\_semi\_af1\ X0\ X1\ X2\ X3\ X4) \Rightarrow ((r2\_semi\_af1\ X0\ X1\ X3\ X2\ X4) \wedge ((r2\_semi\_af1\ X0\ X3\ X4\ X1\ X2) \wedge ((r2\_semi\_af1\ X0\ X2\ X1\ X4\ X3) \wedge ((r2\_semi\_af1\ X0\ X3\ X1\ X4\ X2) \wedge ((r2\_semi\_af1\ X0\ X4\ X2\ X3\ X1) \wedge (r2\_semi\_af1\ X0\ X2\ X4\ X1\ X3)))))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v1\_semi\_af1\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow ((r3\_semi\_af1\ X0\ X1\ X2\ X3\ X4) \Leftrightarrow (\neg(\neg(X1 = X2) \wedge (X3 = X4)) \wedge (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(r2\_semi\_af1\ X0\ X5\ X6\ X1\ X2) \wedge (r2\_semi\_af1\ X0\ X5\ X6\ X3\ X4))))))))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v1\_semi\_af1\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow ((r3\_semi\_af1\ X0\ X1\ X2\ X3\ X4) \Rightarrow (r3\_semi\_af1\ X0\ X2\ X1\ X4\ X3))))))$$