l14_homothet (TM-bUKYjgjf8nKEMQS7wTxqAVREME7GZuKL8)

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Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_diraf : \iota \Rightarrow o$ be given. Let $v2\_diraf : \iota \Rightarrow o$ 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 $r1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_aff\_2 : \iota \Rightarrow o$ be given. Let $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v1\_diraf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_aff\_1\ X0\ X1\ X2\ X3) \Rightarrow ((r1\_aff\_1\ X0\ X1\ X3\ X2) \wedge ((r1\_aff\_1\ X0\ X2\ X1\ X3) \wedge ((r1\_aff\_1\ X0\ X2\ X3\ X1) \wedge ((r1\_aff\_1\ X0\ X3\ X1\ X2) \wedge (r1\_aff\_1\ X0\ X3\ X2\ X1)))))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0) \wedge ((v1\_diraf\ X0) \wedge (l1\_analoaf\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_aff\_1\ X0\ X1\ X2\ X4) \wedge ((r1\_aff\_1\ X0\ X1\ X3\ X5) \wedge ((r1\_aff\_1\ X0\ X1\ X3\ X6) \wedge ((r2\_analoaf\ X0\ X2\ X3\ X4\ X5) \wedge (r2\_analoaf\ X0\ X2\ X3\ X4\ X6))))) \Rightarrow ((r1\_aff\_1\ X0\ X1\ X2\ X3) \vee (X5 = X6)))))))))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge((v2\_diraf\ X0)\wedge (l1\_analoaf\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow((r1\_aff\_1\ X0\ X1\ X2\ X3)\Rightarrow((X1 = X2)\vee((X1 = X3)\vee(((\neg(\neg r1\_aff\_1\ X0\ X1\ X2\ X4)\wedge((r1\_aff\_1\ X0\ X1\ X4\ X5)\wedge(r2\_analoaf\ X0\ X2\ X4\ X3\ X5)))\wedge(\neg(r1\_aff\_1\ X0\ X1\ X2\ X4)\wedge(\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\wedge(\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\wedge((\neg r1\_aff\_1\ X0\ X1\ X2\ X6)\wedge((r1\_aff\_1\ X0\ X1\ X6\ X7)\wedge((r2\_analoaf\ X0\ X2\ X6\ X3\ X7)\wedge((r2\_analoaf\ X0\ X6\ X4\ X7\ X5)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X5)))))))))\vee((X1\neq X3)\wedge((X1\neq X2)\wedge((r1\_aff\_1\ X0\ X1\ X3\ X2)\wedge(((\neg r1\_aff\_1\ X0\ X1\ X3\ X5)\wedge((r1\_aff\_1\ X0\ X1\ X5\ X4)\wedge(r2\_analoaf\ X0\ X3\ X5\ X2\ X4)))\vee((r1\_aff\_1\ X0\ X1\ X3\ X5)\wedge(\exists X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\wedge(\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\wedge((\neg r1\_aff\_1\ X0\ X1\ X3\ X6)\wedge((r1\_aff\_1\ X0\ X1\ X6\ X7)\wedge((r2\_analoaf\ X0\ X3\ X6\ X2\ X7)\wedge((r2\_analoaf\ X0\ X6\ X5\ X7\ X4)\wedge(r1\_aff\_1\ X0\ X1\ X3\ X4)))))))))))))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge((v2\_diraf\ X0)\wedge (l1\_analoaf\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\Rightarrow(((r1\_aff\_1\ X0\ X1\ X2\ X3)\wedge((v4\_aff\_2\ X0)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X4)))\Rightarrow((X1 = X2)\vee((\forall X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ (u1\_struct\_0\ X0))\Rightarrow(\neg(\neg r1\_aff\_1\ X0\ X1\ X2\ X7)\wedge((r1\_aff\_1\ X0\ X1\ X7\ X8)\wedge((r2\_analoaf\ X0\ X2\ X7\ X3\ X8)\wedge((r2\_analoaf\ X0\ X7\ X4\ X8\ X5)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X5)))))))\vee((\forall X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\Rightarrow(\forall X8.(m1\_subset\_1\ X8\ (u1\_struct\_0\ X0))\Rightarrow(\neg(\neg r1\_aff\_1\ X0\ X1\ X2\ X7)\wedge((r1\_aff\_1\ X0\ X1\ X7\ X8)\wedge((r2\_analoaf\ X0\ X2\ X7\ X3\ X8)\wedge((r2\_analoaf\ X0\ X7\ X4\ X8\ X6)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X6)))))))\vee(X5 = X6))))))))))) \tag{4}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge((v1\_diraf\ X0)\wedge((v2\_diraf\ X0)\wedge (l1\_analoaf\ X0))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (u1\_struct\_0\ X0))\Rightarrow(((r1\_aff\_1\ X0\ X1\ X2\ X3)\wedge(v4\_aff\_2\ X0))\Rightarrow((X1 = X2)\vee((X1 = X3)\vee(((\neg(\neg r1\_aff\_1\ X0\ X1\ X2\ X4)\wedge((r1\_aff\_1\ X0\ X1\ X4\ X5)\wedge(r2\_analoaf\ X0\ X2\ X4\ X3\ X5)))\wedge(\neg (r1\_aff\_1\ X0\ X1\ X2\ X4)\wedge(\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\wedge(\exists X8.(m1\_subset\_1\ X8\ (u1\_struct\_0\ X0))\wedge((\neg r1\_aff\_1\ X0\ X1\ X2\ X7)\wedge((r1\_aff\_1\ X0\ X1\ X7\ X8)\wedge((r2\_analoaf\ X0\ X2\ X7\ X3\ X8)\wedge((r2\_analoaf\ X0\ X7\ X4\ X8\ X5)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X5)))))))))\vee(((\neg(\neg r1\_aff\_1\ X0\ X1\ X2\ X6)\wedge((r1\_aff\_1\ X0\ X1\ X6\ X5)\wedge(r2\_analoaf\ X0\ X2\ X6\ X3\ X5)))\wedge(\neg(r1\_aff\_1\ X0\ X1\ X2\ X6)\wedge(\exists X7.(m1\_subset\_1\ X7\ (u1\_struct\_0\ X0))\wedge(\exists X8.(m1\_subset\_1\ X8\ (u1\_struct\_0\ X0))\wedge ((\neg r1\_aff\_1\ X0\ X1\ X2\ X7)\wedge((r1\_aff\_1\ X0\ X1\ X7\ X8)\wedge((r2\_analoaf\ X0\ X2\ X7\ X3\ X8)\wedge((r2\_analoaf\ X0\ X7\ X6\ X8\ X5)\wedge(r1\_aff\_1\ X0\ X1\ X2\ X5)))))))))\vee (X4 = X6))))))))))))$$