

t59\_analmetr (TMKF-  
BTvYVC7MujfKARepmtJJHNNs4qZXy6P)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_analmetr : \iota \Rightarrow o$  be given. Let  $l1\_analmetr : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_diraf : \iota \Rightarrow o$  be given. Let  $l1\_analoaf : \iota \Rightarrow o$  be given. Let  $k3\_analmetr : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $g1\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_analoaf : \iota \Rightarrow \iota$  be given. Let  $v1\_analoaf : \iota \Rightarrow o$  be given. Let  $r4\_analmetr : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow ((r2\_analoaf \\ & X0 X1 X2 X3 X4) \Rightarrow ((r2\_analoaf X0 X1 X2 X4 X3) \wedge ((r2\_analoaf X0 X2 X1 X3 \\ & X4) \wedge ((r2\_analoaf X0 X2 X1 X4 X3) \wedge ((r2\_analoaf X0 X3 X4 X1 X2) \wedge ((r2\_analoaf \\ & X0 X3 X4 X2 X1) \wedge ((r2\_analoaf X0 X4 X3 X1 X2) \wedge (r2\_analoaf X0 X4 X3 X2 \\ & X1))))))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_analmetr X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow \\ & (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 \\ & X5 (u1\_struct\_0 (k3\_analmetr X0))) \Rightarrow (\forall X6.(m1\_subset\_1 \\ & X6 (u1\_struct\_0 (k3\_analmetr X0))) \Rightarrow (\forall X7.(m1\_subset\_1 \\ & X7 (u1\_struct\_0 (k3\_analmetr X0))) \Rightarrow (\forall X8.(m1\_subset\_1 \\ & X8 (u1\_struct\_0 (k3\_analmetr X0))) \Rightarrow (((X1 = X5) \wedge ((X2 = X6) \wedge ((X3 = \\ & X7) \wedge (X4 = X8)))) \Rightarrow ((r2\_analoaf X0 X1 X2 X3 X4) \Leftrightarrow (r2\_analoaf (k3\_analmetr \\ & X0) X5 X6 X7 X8))))))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0) (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2.\forall X3. \\ & (g1\_analoaf X0 X1 = g1\_analoaf X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(l1\_analoaf X0) \Rightarrow (m1\_subset\_1 (u1\_analoaf X0) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_analmetr X0)) \Rightarrow ((v1\_analoaf \\ & (k3\_analmetr X0)) \wedge (l1\_analoaf (k3\_analmetr X0))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_analmetr X0)) \Rightarrow ((v2\_analmetr \\ & X0) \Leftrightarrow (((\neg v7\_struct\_0 (g1\_analoaf (u1\_struct\_0 X0) (u1\_analoaf \\ & X0))) \wedge ((v1\_diraf (g1\_analoaf (u1\_struct\_0 X0) (u1\_analoaf X0))) \wedge \\ & (l1\_analoaf (g1\_analoaf (u1\_struct\_0 X0) (u1\_analoaf X0)))))) \wedge \\ & ((\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 (\forall X7.(m1\_subset\_1 X7 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X8.(m1\_subset\_1 X8 (u1\_struct\_0 X0)) \Rightarrow (((r4\_analmetr \\ & X0 X1 X2 X1 X2) \Rightarrow (X1 = X2)) \wedge ((r4\_analmetr X0 X1 X2 X3 X3) \wedge ((r4\_analmetr \\ & X0 X1 X2 X3 X4) \Rightarrow ((r4\_analmetr X0 X1 X2 X4 X3) \wedge (r4\_analmetr X0 X3 X4 \\ & X1 X2))) \wedge ((\neg (r4\_analmetr X0 X1 X2 X5 X6) \wedge ((r2\_analoaf X0 X1 X2 X7 \\ & X8) \wedge ((\neg r4\_analmetr X0 X5 X6 X7 X8) \wedge (X1 \neq X2)))) \wedge (((r4\_analmetr \\ & X0 X1 X2 X5 X6) \wedge (r4\_analmetr X0 X1 X2 X5 X8)) \Rightarrow (r4\_analmetr X0 X1 X2 \\ & X6 X8)))))))))) \wedge ((\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 (\neg (X1 \neq X2) \wedge (\forall X4.(m1\_subset\_1 \\ & X4 (u1\_struct\_0 X0)) \Rightarrow (\neg (r2\_analoaf X0 X1 X2 X1 X4) \wedge (r4\_analmetr \\ & X0 X1 X2 X4 X3)))))) \wedge (\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 (\exists X4.(m1\_subset\_1 X4 \\ & (u1\_struct\_0 X0)) \wedge ((r4\_analmetr X0 X1 X2 X3 X4) \wedge (X3 \neq X4)))))))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_analmetr X0)) \Rightarrow (k3\_analmetr \\ & X0 = g1\_analoaf (u1\_struct\_0 X0) (u1\_analoaf X0)) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(l1\_analoaf\ X0) \Rightarrow ((v1\_analoaf\ X0) \Rightarrow (X0 = g1\_analoaf\ (u1\_struct\_0\ X0)\ (u1\_analoaf\ X0))) \quad (8)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_analmetr\ X0) \wedge (l1\_analmetr\ X0))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2. \\ & (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow \\ & ((r2\_analoaf\ X0\ X1\ X2\ X3\ X4) \Rightarrow ((r2\_analoaf\ X0\ X1\ X2\ X4\ X3) \wedge ((r2\_analoaf\ X0\ X2\ X1\ X3\ X4) \wedge ((r2\_analoaf\ X0\ X2\ X1\ X4\ X3) \wedge ((r2\_analoaf\ X0\ X3\ X4\ X1\ X2) \wedge ((r2\_analoaf\ X0\ X3\ X4\ X2\ X1) \wedge ((r2\_analoaf\ X0\ X4\ X3\ X1\ X2) \wedge (r2\_analoaf\ X0\ X4\ X3\ X2\ X1))))))))))))) \end{aligned}$$