

## l4\_homothet

(TMVP6tg6mHNG4dTPEzcYKyK6uW88Vjqo7qq)

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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  $v7\_aff\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r5\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v11\_aff\_2 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow \\ ((r3\_aff\_1 X0 X1 X2) \Rightarrow ((v1\_aff\_1 X1 X0) \wedge (v1\_aff\_1 X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge ((v2\_diraf X0) \wedge (l1\_analoaf X0)))) \Rightarrow ((v7\_aff\_2 X0) \Rightarrow (v11\_aff\_2 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf \\ X0) \wedge (l1\_analoaf X0))) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ X0))) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow ((r5\_aff\_1 \\ X0 X1 X2) \Leftrightarrow (r3\_aff\_1 X0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& ((v11\_aff\_2 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 \\
& X0))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow (\forall X6.(m1\_subset\_1 X6 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X7.(m1\_subset\_1 X7 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X8.(m1\_subset\_1 X8 (u1\_struct\_0 X0)) \Rightarrow (\forall X9.(m1\_subset\_1 \\
& X9 (u1\_struct\_0 X0)) \Rightarrow (((r5\_aff\_1 X0 X1 X2) \wedge ((r5\_aff\_1 X0 X1 X3) \wedge \\
& ((X4 \in X1) \wedge ((X7 \in X1) \wedge ((X5 \in X2) \wedge ((X8 \in X2) \wedge ((X6 \in X3) \wedge ((X9 \in X3) \wedge \\
& (v1\_aff\_1 X1 X0) \wedge ((v1\_aff\_1 X2 X0) \wedge ((v1\_aff\_1 X3 X0) \wedge ((r2\_analoaf \\
& X0 X4 X5 X7 X8) \wedge (r2\_analoaf X0 X4 X6 X7 X9)))))))))) \Rightarrow ((X1 = X2) \vee \\
& ((X1 = X3) \vee (r2\_analoaf X0 X5 X6 X8 X9))))))))))
\end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (v2\_diraf X0) \wedge \\
& (l1\_analoaf X0))) \Rightarrow ((v7\_aff\_2 X0) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2.(m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X3.(m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X4.(m1\_subset\_1 \\
& X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 \\
& X0)) \Rightarrow (\forall X6.(m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow (\forall X7. \\
& (m1\_subset\_1 X7 (u1\_struct\_0 X0)) \Rightarrow (\forall X8.(m1\_subset\_1 X8 \\
& (u1\_struct\_0 X0)) \Rightarrow (\forall X9.(m1\_subset\_1 X9 (u1\_struct\_0 X0)) \Rightarrow \\
& (((r5\_aff\_1 X0 X1 X2) \wedge ((r5\_aff\_1 X0 X1 X3) \wedge ((X4 \in X1) \wedge ((X5 \in X1) \wedge \\
& ((X6 \in X2) \wedge ((X7 \in X2) \wedge ((X8 \in X3) \wedge ((X9 \in X3) \wedge ((r2\_analoaf X0 X4 X6 X5 \\
& X7) \wedge (r2\_analoaf X0 X4 X8 X5 X9)))))))))) \Rightarrow ((X1 = X2) \vee ((X1 = X3) \vee ( \\
& r2\_analoaf X0 X6 X8 X7 X9))))))))))
\end{aligned}$$