

## l27\_homothet

(TMb2aDGS8fQcvToNT6wx2qCKhkKeHx8UTrv)

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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  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $r2\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow (\neg(r2\_aff\_1 X0 X1 X2 X3) \wedge ((\neg X1 \in X3) \wedge (X2 \in X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 \\ & X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (u1\_struct\_0 X0)))) \Rightarrow ((r2\_aff\_1 X0 X1 X2 X3) \Rightarrow (r2\_aff\_1 X0 X2 X1 X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge ((v2\_diraf X0) \wedge \\ & (l1\_analoaf X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow ((r2\_aff\_1 X0 \\ & X1 X2 X3) \Rightarrow ((X1 \in X3) \vee (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow \\ & (\neg \forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0)) \Rightarrow ((\neg(X4 \in X3) \wedge \\ & X4 = X5)) \wedge (\neg(\neg X4 \in X3) \wedge (\exists X6.(m1\_subset\_1 X6 (u1\_struct\_0 \\ & X0)) \wedge (\exists X7.(m1\_subset\_1 X7 (u1\_struct\_0 X0)) \wedge ((X6 \in X3) \wedge \\ & ((X7 \in X3) \wedge ((r2\_analoaf X0 X6 X1 X7 X4) \wedge ((r2\_analoaf X0 X6 X2 X7 X5) \wedge \\ & (r2\_aff\_1 X0 X4 X5 X3)))))))))))))) \end{aligned} \tag{3}$$

**Theorem 1**

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