

## t8\_translac

(TMN6EYSg7H8bSzSs2qUwMpKJhm1zHtBEy1Y)

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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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_transgeo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v11\_aff\_2 : \iota \Rightarrow o$  be given. Let  $v6\_transgeo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_analoaf : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_aff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
 & \quad (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) \\
 & \quad (u1\_struct\_0 X0)) \wedge ((v3\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 \\
 & \quad X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
 & \quad X0) (u1\_struct\_0 X0)))))) \Rightarrow ((v6\_transgeo X1 X0) \Leftrightarrow (\forall X2. \\
 & \quad (m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 \\
 & \quad (u1\_struct\_0 X0)) \Rightarrow (r2\_analoaf X0 X2 X3 (k3\_funct\_2 (u1\_struct\_0 \\
 & \quad X0) (u1\_struct\_0 X0) X1 X2) (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
 & \quad X0) X1 X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge ((v2\_diraf X0) \wedge \\
 & \quad (l1\_analoaf X0)))) \Rightarrow ((v11\_aff\_2 X0) \Leftrightarrow (\forall X1. (m1\_subset\_1 \\
 & \quad X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\
 & \quad X0)) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4. \\
 & \quad (m1\_subset\_1 X4 (u1\_struct\_0 X0)) \Rightarrow (\forall X5. (m1\_subset\_1 X5 \\
 & \quad (u1\_struct\_0 X0)) \Rightarrow (\forall X6. (m1\_subset\_1 X6 (u1\_struct\_0 X0)) \Rightarrow \\
 & \quad (((r2\_analoaf X0 X1 X2 X3 X5) \wedge ((r2\_analoaf X0 X1 X2 X4 X6) \wedge ((r2\_analoaf \\
 & \quad X0 X1 X3 X2 X5) \wedge (r2\_analoaf X0 X1 X4 X2 X6)))) \Rightarrow ((r1\_aff\_1 X0 X1 X2 X3) \vee \\
 & \quad ((r1\_aff\_1 X0 X1 X2 X4) \vee (r2\_analoaf X0 X3 X4 X5 X6)))))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge ((v2\_diraf X0) \wedge \\
& \quad (l1\_analoaf X0)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\forall X3. \\
& \quad (m1\_subset\_1 X3 (u1\_struct\_0 X0)) \Rightarrow (\forall X4.((v1\_funct\_1 X4) \wedge \\
& \quad ((v1\_funct\_2 X4 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge ((v3\_funct\_2 \\
& \quad X4 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\
& \quad (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))) \Rightarrow ((v7\_transgeo \\
& \quad X4 X0) \wedge ((r2\_analoaf X0 X1 (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& \quad X0) X4 X1) X2 X3) \wedge (r2\_analoaf X0 X1 X2 (k3\_funct\_2 (u1\_struct\_0 X0) \\
& \quad (u1\_struct\_0 X0) X4 X1) X3))) \Rightarrow ((r1\_aff\_1 X0 X1 (k3\_funct\_2 (u1\_struct\_0 \\
& \quad X0) (u1\_struct\_0 X0) X4 X1) X2) \vee (X3 = k3\_funct\_2 (u1\_struct\_0 X0) \\
& \quad (u1\_struct\_0 X0) X4 X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge (l1\_analoaf X0))) \Rightarrow \\
& \quad (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) \\
& \quad (u1\_struct\_0 X0)) \wedge ((v3\_funct\_2 X1 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& \quad X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& \quad X0) (u1\_struct\_0 X0)))))) \Rightarrow ((v7\_transgeo X1 X0) \Leftrightarrow ((v6\_transgeo \\
& \quad X1 X0) \wedge ((r2\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X0) X1 (k6\_partfun1 \\
& \quad (u1\_struct\_0 X0))) \vee (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (X2 \neq k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X0) X1 X2))))))
\end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v7\_struct\_0 X0) \wedge ((v1\_diraf X0) \wedge ((v2\_diraf X0) \wedge \\
& \quad (l1\_analoaf X0)))) \Rightarrow ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 \\
& \quad X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (\exists X3. \\
& \quad ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& \quad X0)) \wedge ((v3\_funct\_2 X3 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\
& \quad X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)))))) \wedge \\
& \quad ((v7\_transgeo X3 X0) \wedge (k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 \\
& \quad X0) X3 X1 = X2)))) \Rightarrow (v11\_aff\_2 X0))
\end{aligned}$$