

t25\_conlat\_1  
(TMdga8atiEQvZaeg23uvTtfgwPjWc9kE1dH)

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Let  $v1\_conlat\_1 : \iota \Rightarrow o$  be given. Let  $l1\_conlat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u2\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k6\_conlat\_1 : \iota \Rightarrow \iota$  be given. Let  $u3\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_conlat\_1 : \iota \Rightarrow \iota$  be given. Let  $v9\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v8\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $l5\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_conlat\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_conlat\_1 : \iota \Rightarrow \iota$  be given. Let  $g2\_conlat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v5\_conlat\_1 X1 X0) \wedge ((v7\_conlat\_1 X1 X0) \wedge (l2\_conlat\_1 X1 X0))) \Rightarrow \\ & (((u2\_conlat\_1 X0 X1 = k1\_xboole\_0) \Rightarrow (v9\_conlat\_1 X1 X0)) \wedge ((u3\_conlat\_1 \\ & X0 X1 = k1\_xboole\_0) \Rightarrow (v8\_conlat\_1 X1 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow ((u2\_conlat\_1 \\ & X0 (k5\_conlat\_1 X0) = u1\_struct\_0 X0) \wedge (u3\_conlat\_1 X0 (k6\_conlat\_1 \\ & X0) = u4\_struct\_0 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \tag{3}$$

Assume the following.

$$\forall X0.(l1\_conlat\_1 X0) \Rightarrow (l5\_struct\_0 X0) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow ((v4\_conlat\_1 \\ & (k6\_conlat\_1 X0) X0) \wedge ((\neg v5\_conlat\_1 (k6\_conlat\_1 X0) X0) \wedge ((v7\_conlat\_1 \\ & (k6\_conlat\_1 X0) X0) \wedge ((v9\_conlat\_1 (k6\_conlat\_1 X0) X0) \wedge (l2\_conlat\_1 \\ & (k6\_conlat\_1 X0) X0)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow ((v4\_conlat\_1 \\ (k5\_conlat\_1 X0) X0) \wedge ((\neg v5\_conlat\_1 (k5\_conlat\_1 X0) X0) \wedge ((v7\_conlat\_1 \\ (k5\_conlat\_1 X0) X0) \wedge ((v8\_conlat\_1 (k5\_conlat\_1 X0) X0) \wedge (l2\_conlat\_1 \\ (k5\_conlat\_1 X0) X0)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow (\forall X1. \\ (l2\_conlat\_1 X1 X0) \Rightarrow ((v9\_conlat\_1 X1 X0) \Leftrightarrow (u3\_conlat\_1 X0 X1 = u4\_struct\_0 \\ X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow (\forall X1. \\ (l2\_conlat\_1 X1 X0) \Rightarrow ((v8\_conlat\_1 X1 X0) \Leftrightarrow (u2\_conlat\_1 X0 X1 = u1\_struct\_0 \\ X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow (\forall X1. \\ (l2\_conlat\_1 X1 X0) \Rightarrow ((v7\_conlat\_1 X1 X0) \Leftrightarrow ((k3\_funct\_2 (k1\_zfmisc\_1 \\ (u1\_struct\_0 X0)) (k9\_setfam\_1 (u4\_struct\_0 X0)) (k1\_conlat\_1 \\ X0) (u2\_conlat\_1 X0 X1) = u3\_conlat\_1 X0 X1) \wedge (k3\_funct\_2 (k1\_zfmisc\_1 \\ (u4\_struct\_0 X0)) (k9\_setfam\_1 (u1\_struct\_0 X0)) (k2\_conlat\_1 \\ X0) (u3\_conlat\_1 X0 X1) = u2\_conlat\_1 X0 X1)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((l5\_struct\_0 X0) \wedge (l2\_conlat\_1 X1 X0)) \Rightarrow \\ ((v4\_conlat\_1 X1 X0) \Rightarrow (X1 = g2\_conlat\_1 X0 (u2\_conlat\_1 X0 X1) (u3\_conlat\_1 \\ X0 X1))) \end{aligned} \quad (10)$$

### Theorem 1

$$\begin{aligned} \forall X0.((\neg v1\_conlat\_1 X0) \wedge (l1\_conlat\_1 X0)) \Rightarrow (\forall X1. \\ ((v4\_conlat\_1 X1 X0) \wedge ((\neg v5\_conlat\_1 X1 X0) \wedge ((v7\_conlat\_1 X1 X0) \wedge \\ (l2\_conlat\_1 X1 X0)))) \Rightarrow (((u2\_conlat\_1 X0 X1 = k1\_xboole\_0) \Rightarrow (X1 = \\ k6\_conlat\_1 X0)) \wedge ((u3\_conlat\_1 X0 X1 = k1\_xboole\_0) \Rightarrow (X1 = k5\_conlat\_1 \\ X0)))))) \end{aligned}$$