

t15\_xxreal\_1 (TMPL-  
jAoP1pVXiND4KMSTCpNyBjiREFDViD5)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. (v1\_xxreal\_0 \\ & X2) \Rightarrow ((X0 \in k4\_xxreal\_1 X1 X2) \Rightarrow ((X0 \in k2\_xxreal\_1 X1 X2) \wedge (X0 \neq X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. (v1\_xxreal\_0 \\ & X2) \Rightarrow (\neg(X0 \in k2\_xxreal\_1 X1 X2) \wedge ((\neg(X0 \in k3\_xxreal\_1 X1 X2) \wedge (X0 \neq \\ & X2)) \wedge (X0 \neq X1)))) \end{aligned} \quad (2)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. (v1\_xxreal\_0 X1) \Rightarrow (\forall X2. (v1\_xxreal\_0 \\ & X2) \Rightarrow ((X0 \in k4\_xxreal\_1 X1 X2) \Rightarrow ((X0 \in k3\_xxreal\_1 X1 X2) \wedge (X0 \neq X2)))) \end{aligned}$$