

t6\_xxreal\_1  
(TMJfToMAd1LT4Gi2jiKzJFDZg83EQws9v5c)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k3\_xxreal\_1 X1 X2) \Leftrightarrow ((\neg r1\_xxreal\_0 X0 X1) \wedge \\ & (r1\_xxreal\_0 X0 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k1\_xxreal\_1 X1 X2) \Leftrightarrow ((r1\_xxreal\_0 X1 X0) \wedge \\ & (r1\_xxreal\_0 X0 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\ & (r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ & v2\_membered (k1\_xxreal\_1 X0 X1)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v2\_membered X0) \Leftrightarrow (\forall X1.(X1 \in X0) \Rightarrow (v1\_xxreal\_0 X1)) \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 \\ & X2) \Rightarrow (\neg (X0 \in k1\_xxreal\_1 X1 X2) \wedge (\neg X0 \in k3\_xxreal\_1 X1 X2) \wedge (X0 \neq X1)))) \end{aligned}$$