

t96\_xxreal\_1

(TMT08vXpJby3XqbaAUoNMWzZbSKKRv8pqFH)

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Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (\forall X3.(v1\_xxreal\_0 X3) \Rightarrow ((r1\_xxreal\_0 \\ & X0 X1) \Rightarrow (r1\_xboole\_0 (k2\_xxreal\_1 X2 X0) (k1\_xxreal\_1 X1 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(\neg(\neg r1\_xboole\_0 X0 X1) \wedge (\forall X2.\neg(X2 \in \\ & X0) \wedge (X2 \in X1))) \wedge (\neg(\exists X2.(X2 \in X0) \wedge (X2 \in X1)) \wedge (r1\_xboole\_0 \\ & X0 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2.(v1\_xxreal\_0 \\ & X2) \Rightarrow ((X0 \in k2\_xxreal\_1 X1 X2) \Rightarrow ((X0 \in k1\_xxreal\_1 X1 X2) \wedge (X0 \neq X2)))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xxreal\_0 X2) \Rightarrow (\forall X3.(v1\_xxreal\_0 X3) \Rightarrow ((r1\_xxreal\_0 \\ & X0 X1) \Rightarrow (r1\_xboole\_0 (k2\_xxreal\_1 X2 X0) (k1\_xxreal\_1 X1 X3)))))) \end{aligned}$$