

t91_xxreal_1 (TMFZkXdMebQ- fyfjVxsfHY2dNgLZ2dqmAXdm)

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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 $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((r1_xxreal_0 \\ & X0 X1) \Rightarrow (r1_xboole_0 (k1_xxreal_1 X2 X0) (k4_xxreal_1 X1 X3)))))) \end{aligned} \quad (1)$$

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.

$$\begin{aligned} & \forall X0.\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2.(v1_xxreal_0 \\ & X2) \Rightarrow ((X0 \in k3_xxreal_1 X1 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \wedge (X0 \neq X1)))) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\forall X3.(v1_xxreal_0 X3) \Rightarrow ((r1_xxreal_0 \\ & X0 X1) \Rightarrow (r1_xboole_0 (k3_xxreal_1 X2 X0) (k4_xxreal_1 X1 X3)))))) \end{aligned}$$