

t30_xxreal_2 (TMNbyVK-
TUw9Hmwed73nCGgbMFpyb5eXg4R6)

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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 $k1_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $m1_xxreal_2 : \iota \Rightarrow \iota \Rightarrow o$ 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.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v2_membered (k3_xxreal_1 X0 X1)) \tag{2}$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(m1_xxreal_2 X1 X0) \Rightarrow (v1_xxreal_0 X1)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & X1 = k1_xxreal_2 X0) \Leftrightarrow ((m1_xxreal_2 X1 X0) \wedge (\forall X2.(m1_xxreal_2 \\ & X2 X0) \Rightarrow (r1_xxreal_0 X1 X2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & m1_xxreal_2 X1 X0) \Leftrightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X2 \in X0) \Rightarrow (r1_xxreal_0 \\ & X2 X1)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \tag{6}$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & \neg r1_xxreal_0 X1 X0) \Rightarrow (k1_xxreal_2 (k3_xxreal_1 X0 X1) = X1))) \end{aligned}$$