

t33_xxreal_3

(TMFHaPktx8Emik9tuVeCx8tQ4j9JJ4mxJ82)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg(X0 = k1_xxreal_0) \wedge (X1 = k1_xxreal_0)) \wedge \\ & ((\neg(X0 = k2_xxreal_0) \wedge (X1 = k2_xxreal_0)) \wedge (\neg(X1 = k1_xxreal_0) \wedge \\ & (X2 = k2_xxreal_0)) \wedge (\neg(X1 = k2_xxreal_0) \wedge (X2 = k1_xxreal_0)) \wedge \\ & ((\neg(X0 = k1_xxreal_0) \wedge (X2 = k1_xxreal_0)) \wedge (\neg(X0 = k2_xxreal_0) \wedge \\ & (X2 = k2_xxreal_0)) \wedge (k3_xxreal_3 (k3_xxreal_3 X0 X1) X2 \neq k3_xxreal_3 \\ & X0 (k1_xxreal_3 X1 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & v1_xreal_0 X0) \Rightarrow ((k1_xxreal_3 (k3_xxreal_3 X1 X0) X0 = X1) \wedge (k3_xxreal_3 \\ & (k1_xxreal_3 X1 X0) X0 = X1)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow ((X0 \neq k2_xxreal_0) \Rightarrow ((k3_xxreal_3 \\ & k2_xxreal_0 X0 = k2_xxreal_0) \wedge (k3_xxreal_3 X0 k2_xxreal_0 = k1_xxreal_0))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\neg \\ & (k1_xxreal_3 X0 X1 = k1_xxreal_0) \wedge ((X0 \neq k1_xxreal_0) \wedge (X1 \neq k1_xxreal_0)))) \end{aligned} \tag{4}$$

Assume the following.

$$\neg v1_xreal_0 k1_xxreal_0 \tag{5}$$

Assume the following.

$$\neg v1_xreal_0 k2_xxreal_0 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(v1_xxreal_0 (k1_xxreal_3 X0 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k1_xxreal_3 X0 X1 = k1_xxreal_3 X1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (9)$$

Theorem 1

$$\forall X0.(v1_xxreal_0 X0)\Rightarrow(\forall X1.(v1_xxreal_0 X1)\Rightarrow(\forall X2.(v1_xxreal_0 X2)\Rightarrow((v1_xxreal_0 X0)\Rightarrow(k3_xxreal_3 (k1_xxreal_3 X0 X1) (k1_xxreal_3 X0 X2) = k3_xxreal_3 X1 X2))))$$