

t56_xxreal_3

(TMdqWApVDpF2oDGtnxMwCB9L1pUc2oKpPQe)

October 27, 2020

Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((r1_xxreal_0 X0 k2_xxreal_0) \Rightarrow (X0 = k2_xxreal_0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\neg(\neg(X0 = k1_xxreal_0) \wedge (X1 = k1_xxreal_0)) \wedge \\ & ((\neg(X0 = k2_xxreal_0) \wedge (X1 = k2_xxreal_0)) \wedge ((\neg r1_xxreal_0 X2 (\\ & k3_xxreal_3 X0 X1)) \wedge (\neg(X0 \neq k1_xxreal_0) \wedge ((X1 \neq k2_xxreal_0) \wedge \\ & ((X2 \neq k2_xxreal_0) \wedge (\neg r1_xxreal_0 (k1_xxreal_3 X2 X1) X0)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow (\neg(\neg(X0 = k1_xxreal_0) \wedge (X1 = k2_xxreal_0)) \wedge \\ & ((\neg(X0 = k2_xxreal_0) \wedge (X1 = k1_xxreal_0)) \wedge ((\neg r1_xxreal_0 X2 (\\ & k1_xxreal_3 X0 X1)) \wedge (\neg(X0 \neq k1_xxreal_0) \wedge ((X1 \neq k1_xxreal_0) \wedge \\ & ((X2 \neq k2_xxreal_0) \wedge (\neg r1_xxreal_0 (k3_xxreal_3 X2 X1) X0)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow ((r1_xxreal_0 k1_xxreal_0 X0) \Rightarrow (X0 = k1_xxreal_0)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (5)$$

Assume the following.

$$v1_xxreal_0 k2_xxreal_0 \quad (6)$$

Assume the following.

$$v1_xxreal_0 \ k1_xxreal_0 \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 \ X0)\wedge(v1_xxreal_0 \ X1))\Rightarrow((r1_xxreal_0 \ X0 \ X1)\vee(r1_xxreal_0 \ X1 \ X0)) \quad (9)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 \ X0)\Rightarrow(\forall X1.(v1_xxreal_0 \ X1)\Rightarrow(\forall X2. \\ & (v1_xxreal_0 \ X2)\Rightarrow(\neg(\neg(X0 = k1_xxreal_0)\wedge(X1 = k2_xxreal_0))\wedge \\ & ((\neg(X0 = k2_xxreal_0)\wedge(X1 = k1_xxreal_0))\wedge(\neg(X1 = k1_xxreal_0)\wedge \\ & (X2 = k1_xxreal_0))\wedge(\neg(X1 = k2_xxreal_0)\wedge(X2 = k2_xxreal_0))\wedge \\ & ((r1_xxreal_0 \ (k1_xxreal_3 \ X0 \ X1) \ X2)\wedge(\neg(X1\neq k1_xxreal_0)\wedge(r1_xxreal_0 \\ & \quad X0 \ (k3_xxreal_3 \ X2 \ X1)))))))))) \end{aligned}$$