

t45_xxreal_3

(TMX7U7MvMsNM4u8y7X7gZZU417RgQ344b2H)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ 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. Let $k1_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_numbers) \Rightarrow ((r1_xxreal_0 X2 X1) \vee ((\neg \\ & r1_xxreal_0 (k1_xxreal_3 X2 X0) (k1_xxreal_3 X1 X0)) \wedge (\neg r1_xxreal_0 \\ & (k3_xxreal_3 X2 X0) (k3_xxreal_3 X1 X0))))))) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (r1_xxreal_0 (k1_xxreal_3 \\ & X0 X2) (k1_xxreal_3 X1 X2)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (\\ & v1_xreal_0 (k3_xxreal_3 X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 (k1_xxreal_3 \\ & X1 X0) X2) \Leftrightarrow (r1_xxreal_0 X1 (k3_xxreal_3 X2 X0)))))) \end{aligned}$$