

t43_xxreal_3

(TMQYgvR2X1BESHAm7pm3sD4MLgvJ1efFAKL)

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

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((v1_xreal_0 X0) \Rightarrow ((k1_xxreal_3 (k3_xxreal_3 X1 X0) X0 = X1) \wedge (k3_xxreal_3 (k1_xxreal_3 X1 X0) X0 = X1)))) \tag{1}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow (r1_xxreal_0 (k1_xxreal_3 X0 X2) (k1_xxreal_3 X1 X2)))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v1_xxreal_0 (k3_xxreal_3 X0 X1)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow (v1_xxreal_0 (k1_xxreal_3 X0 X1)) \tag{5}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \tag{7}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_numbers) \Rightarrow ((r1_xreal_0 X2 X1) \vee ((\neg \\ & r1_xxreal_0 (k1_xxreal_3 X2 X0) (k1_xxreal_3 X1 X0)) \wedge (\neg r1_xreal_0 \\ & (k3_xxreal_3 X2 X0) (k3_xxreal_3 X1 X0))))))) \end{aligned}$$