

t98_xreal_1

(TMbwR8EGJCzFtcHifK4SiMXW8Wn5DDBca3A)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\neg(r1_xxreal_0 \\ & k6_numbers X0) \wedge ((r1_xxreal_0 k6_numbers X1) \wedge ((\neg r1_xxreal_0 \\ & X2 X0) \wedge ((\neg r1_xxreal_0 X3 X1) \wedge (r1_xxreal_0 (k3_xcmplx_0 X2 X3) \\ & (k3_xcmplx_0 X0 X1)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k3_xcmplx_0 X0 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg \\ & r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 k6_numbers X1) \wedge (r1_xxreal_0 \\ & k6_numbers (k3_xcmplx_0 X0 X1)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 \\ & X2 X1) \wedge (r1_xxreal_0 (k3_xcmplx_0 X2 X0) (k3_xcmplx_0 X1 X0)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \tag{6}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & X0 k6_numbers) \wedge (\neg r1_xxreal_0 X1 k6_numbers) \wedge (r1_xxreal_0 \\ & X0 X2) \wedge ((\neg r1_xxreal_0 X3 X1) \wedge (r1_xxreal_0 (k3_xcmplx_0 X2 X3) \\ & (k3_xcmplx_0 X0 X1)))))))))) \end{aligned}$$