

t180_xreal_1
(TMbTdmE2fdxivKjtreHTA1cddqRfzVLF9SD)

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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 $np_1 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xxreal_0 k6_numbers (k3_xcmplx_0 X0 X0)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X1 X0) \wedge (r1_xxreal_0 (k6_xcmplx_0 X1 X0) k6_numbers))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(r1_xxreal_0 k6_numbers X0) \wedge ((\neg r1_xxreal_0 X2 X1) \wedge (r1_xxreal_0 (k2_xcmplx_0 X0 X2) X1)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 np_1 X0) \wedge (r1_xxreal_0 X1 X2) \wedge ((\neg r1_xxreal_0 X3 X1) \wedge (r1_xxreal_0 (k2_xcmplx_0 (k3_xcmplx_0 (k6_xcmplx_0 np_1 X0) X2) (k3_xcmplx_0 X0 X3)) X1)))))))))) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (\neg(r1_xxreal_0 \\ & k6_numbers X0) \wedge ((r1_xxreal_0 X0 \text{ np_1}) \wedge ((\neg r1_xxreal_0 X2 X1) \wedge \\ & ((\neg r1_xxreal_0 X3 X1) \wedge (r1_xxreal_0 (k2_xcmplx_0 (k3_xcmplx_0 \\ & (k6_xcmplx_0 \text{ np_1} X0) X2) (k3_xcmplx_0 X0 X3)) X1)))))))))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((r1_xxreal_0 \\ & k6_numbers X0) \wedge ((r1_xxreal_0 X0 \text{ np_1}) \wedge ((r1_xxreal_0 X1 X2) \wedge \\ & (r1_xxreal_0 X1 X3)))))) \Rightarrow (r1_xxreal_0 X1 (k2_xcmplx_0 (k3_xcmplx_0 \\ & (k6_xcmplx_0 \text{ np_1} X0) X2) (k3_xcmplx_0 X0 X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 X0 = k6_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k7_xcmplx_0 X0 X0 = \text{np_1})) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k7_xcmplx_0 X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k6_xcmplx_0 X0 X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \wedge ((r1_xxreal_0 \\ & X0 \text{ np_1}) \wedge (r1_xxreal_0 (k2_xcmplx_0 (k3_xcmplx_0 (k6_xcmplx_0 \\ & \text{np_1} X0) X1) (k3_xcmplx_0 X0 X2)) X1)))) \Rightarrow ((r1_xxreal_0 X2 (k2_xcmplx_0 \\ & (k3_xcmplx_0 (k6_xcmplx_0 \text{ np_1} X0) X1) (k3_xcmplx_0 X0 X2))) \vee \\ & (X0 = k6_numbers)))))) \end{aligned}$$