

t42_xreal_1

(TMc46XPMPU8VmE7pz1fZg2zyYwU17rDCv6f)

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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 $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X1 X0) \wedge (\forall X2.(v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X2 X0) \wedge (\neg r1_xxreal_0 X1 X2)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow (X0 = k6_xcmplx_0 (k2_xcmplx_0 X0 X1) X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 (k2_xcmplx_0 X0 X1) X2) \Leftrightarrow (r1_xxreal_0 X0 (k6_xcmplx_0 X2 X1)))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 (k6_xcmplx_0 X1 X2)) \Rightarrow (r1_xxreal_0 X2 (k6_xcmplx_0 X1 X0)))))) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ (k4_xcmplx_0 \ np_1) = np_0 \quad (7)$$

Assume the following.

$$\exists X0. (v1_xboole_0 \ X0) \wedge ((v1_xcmplx_0 \ X0) \wedge ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X0))) \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 \ X0) \Rightarrow (\forall X1. (v1_xreal_0 \ X1) \Rightarrow (\neg(\neg \\ & r1_xreal_0 \ X1 \ X0) \wedge (r1_xreal_0 \ k6_numbers \ (k6_xcmplx_0 \ X0 \ X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (v1_xreal_0 \ (k6_xcmplx_0 \ X0 \ X1)) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (v1_xcmplx_0 \ (k2_xcmplx_0 \ X0 \ X1)) \quad (11)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (\forall X1. (v1_xcmplx_0 \ X1) \Rightarrow ((\\ & X1 = k4_xcmplx_0 \ X0) \Leftrightarrow (k2_xcmplx_0 \ X0 \ X1 = k6_numbers))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k2_xcmplx_0 \ X0 \ X1 = k2_xcmplx_0 \ X1 \ X0) \quad (14)$$

Assume the following.

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

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (16)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v1_xreal_0 \ X0) \Rightarrow (\forall X1. (v1_xreal_0 \ X1) \Rightarrow ((\forall X2. \\ & (v1_xreal_0 \ X2) \Rightarrow ((\neg r1_xreal_0 \ k6_numbers \ X2) \Rightarrow (r1_xreal_0 \\ & (k2_xcmplx_0 \ X0 \ X2) \ X1))) \Rightarrow (r1_xreal_0 \ X0 \ X1))) \end{aligned}$$