

t1_goboard7 (TMX-
EVgkE4Y6Vd4jGkv4TqC9aBQvj2foAHAg)

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Let $m1_subset.1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal.0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k9_real.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal.0 : \iota \Rightarrow o$ be given. Let $k6_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx.0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx.0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx.0 : \iota \Rightarrow o$ be given. Let $k1_xxreal.0 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal.0 X2) \Rightarrow ((r1_xxreal.0 X0 X1) \Leftrightarrow (r1_xxreal.0 (k6_xcmplx.0 \\ & X0 X2) (k6_xcmplx.0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal.0 X2) \Rightarrow ((r1_xxreal.0 X0 X1) \Leftrightarrow (r1_xxreal.0 (k2_xcmplx.0 \\ & X0 X2) (k2_xcmplx.0 X1 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (((r1_xxreal.0 \\ & (k4_xcmplx.0 X0) X1) \wedge (r1_xxreal.0 X1 X0)) \Leftrightarrow (r1_xxreal.0 (k18_complex1 \\ & X1) X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx.0 X0) \Rightarrow (\forall X1.(v1_xcmplx.0 X1) \Rightarrow (X0 = \\ & k2_xcmplx.0 (k6_xcmplx.0 X0 X1) X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx.0 X0) \Rightarrow (\forall X1.(v1_xcmplx.0 X1) \Rightarrow (X0 = \\ & k6_xcmplx.0 (k2_xcmplx.0 X0 X1) X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal.0 X0) \Rightarrow (\forall X1.(v1_xreal.0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal.0 X2) \Rightarrow ((r1_xxreal.0 X0 (k2_xcmplx.0 X1 X2)) \Leftrightarrow (r1_xxreal.0 \\ & (k6_xcmplx.0 X0 X1) X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k9_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(k7_real_1 X0 X1 = k2_xcmplx_0 X0 X1) \quad (9)$$

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.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(v1_xreal_0 (k2_xcmplx_0 X0 X1)) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge(v1_xreal_0 (k4_xcmplx_0 X0))) \quad (12)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (13)$$

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.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (16)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow(\forall X2.(m1_subset_1 X2 k1_numbers)\Rightarrow(\neg(\neg r1_xxreal_0 (k18_complex1 (k9_real_1 X0 X1)) X2)\wedge((r1_xxreal_0 X1 (k7_real_1 X0 X2))\wedge(r1_xxreal_0 X0 (k7_real_1 X1 X2))))))$$