

t1_sin_cos6

(TMZ3HeLKJrMqqZZDSqDoBrZjS8aYBNXgJAC)

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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 $k1_int_1 : \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ 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 $np_0 : \iota$ be given. Let $k5_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k6_xcmplx_0 \\ & X0 X2) (k6_xcmplx_0 X1 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg \\ & r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 \\ & X2 X1) \wedge (r1_xxreal_0 (k7_xcmplx_0 X2 X0) (k7_xcmplx_0 X1 X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k7_xcmplx_0 X0 X0 = np_1)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X1) \wedge (v2_xxreal_0 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(r1_xxreal_0 X0 X1) \wedge ((\neg v3_xxreal_0 X0) \wedge (v3_xxreal_0 X1)))) \quad (7)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (8)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (9)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (10)$$

Assume the following.

$$k6_xcmplx_0 np_1 np_1 = np_0 \quad (11)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (m1_subset_1 X1 k1_numbers)) \Rightarrow (k5_real_1 X0 X1 = k6_xcmplx_0 X0 X1) \quad (13)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (14)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k7_xcmplx_0 X0 X1)) \quad (16)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3_xxreal_0 X0)\wedge(v1_xreal_0 X0))\wedge((\neg v3_xxreal_0 X1)\wedge(v1_xreal_0 X1)))\Rightarrow(\neg v3_xxreal_0 (k7_xcmplx_0 X0 X1)) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow((X1 = k1_int_1 X0)\Leftrightarrow((r1_xxreal_0 X1 X0)\wedge(\neg r1_xxreal_0 X1 (k5_real_1 X0 np_1)))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (20)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v3_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v2_xxreal_0 X0))) \quad (21)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (22)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 X0)\wedge(v2_xxreal_0 X0))\Rightarrow((\neg v1_xboole_0 X0)\wedge((v1_xxreal_0 X0)\wedge(\neg v3_xxreal_0 X0))) \quad (23)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0)\Rightarrow(v1_int_1 X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.(v6_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v7_ordinal1 X1)) \quad (27)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow((r1_xxreal_0 k6_numbers X0)\Rightarrow((r1_xxreal_0 X1 X0)\vee(k1_int_1 (k7_xcmplx_0 X0 X1) = k6_numbers))))$$