

t30_sin_cos6

(TMcyyaspo5mmaPsF8aF1QX4SduoXfdAsCFi)

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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 $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $np_2 : \iota$ be given. Let $np_1 : \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ 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 $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.(v1_xreal_0 X2) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 k6_numbers X2)) \Rightarrow (r1_xxreal_0 (k3_xcmplx_0 X0 X2) (k3_xcmplx_0 X1 X2)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (r1_xxreal_0 (k17_sin_cos X0) np_1) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X2)) \Rightarrow \\ & (r1_xxreal_0 X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \wedge ((\\ & r1_xreal_0 X0 (k8_real_1 np_2 k32_sin_cos)) \wedge (k17_sin_cos X0 = \\ & np_1))) \Rightarrow (X0 = k10_real_1 k32_sin_cos np_2)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((\\ & (r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ & X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 \\ & X0 (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ & X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 X0 (k7_xcmplx_0 X1 X2) = k7_xcmplx_0 \\ & (k3_xcmplx_0 X0 X1) X2) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (12)$$

Assume the following.

$$v1_xboole_0 np_0 \quad (13)$$

Assume the following.

$$k3_xcmplx_0 (k7_xcmplx_0 np_1 np_2) np_2 = np_1 \quad (14)$$

Assume the following.

$$k3_xcmplx_0 (k7_xcmplx_0 np_1 np_2) np_1 = k7_xcmplx_0 np_1 np_2 \quad (15)$$

Assume the following.

$$k3_xcmplx_0 \ np_2 \ (k7_xcmplx_0 \ np_1 \ np_2) = np_1 \quad (16)$$

Assume the following.

$$r1_xxreal_0 \ (k7_xcmplx_0 \ np_1 \ np_2) \ np_1 \quad (17)$$

Assume the following.

$$r1_xxreal_0 \ np_0 \ np_2 \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_numbers)\wedge(v1_xreal_0 \ X1))\Rightarrow(k8_real_1 \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1) \quad (19)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (20)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (21)$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_numbers)\wedge(v1_xreal_0 \ X1))\Rightarrow(k10_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \quad (23)$$

Assume the following.

$$\exists X0.(v1_xboole_0 \ X0)\wedge((v1_xcmplx_0 \ X0)\wedge((v1_xxreal_0 \ X0)\wedge(v1_xreal_0 \ X0))) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0)\wedge(v1_xreal_0 \ X1))\Rightarrow(v1_xreal_0 \ (k7_xcmplx_0 \ X0 \ X1)) \quad (25)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0)\wedge(v1_xreal_0 \ X1))\Rightarrow(v1_xreal_0 \ (k3_xcmplx_0 \ X0 \ X1)) \quad (26)$$

Assume the following.

$$v6_membered \ k4_ordinal1 \quad (27)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(v1_xcmplx_0 (k7_xcmplx_0 X0 X1)) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (29)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xreal_0 (k17_sin_cos X0)) \quad (30)$$

Assume the following.

$$v3_membered\ k1_numbers \quad (31)$$

Assume the following.

$$(v1_xreal_0\ k31_sin_cos)\wedge(v2_xxreal_0\ k31_sin_cos) \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0\ k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k8_real_1 X0 X1)\ k1_numbers) \quad (33)$$

Assume the following.

$$m1_subset_1\ k32_sin_cos\ k1_numbers \quad (34)$$

Assume the following.

$$v1_xreal_0\ k31_sin_cos \quad (35)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0\ k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k10_real_1 X0 X1)\ k1_numbers) \quad (36)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow((r1_xxreal_0 X0 X1)\vee(r1_xxreal_0 X1 X0)) \quad (37)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (38)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (39)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (40)$$

Assume the following.

$$\forall X0.((v1_xreal_0\ X0)\wedge(v2_xreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xreal_0\ X0)\wedge(\neg v3_xreal_0\ X0))) \quad (41)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (42)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (43)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (44)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (45)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v7_ordinal1\ X1)) \quad (46)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (47)$$

Theorem 1

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(\neg(r1_xreal_0\ k6_numbers\ X0)\wedge((\neg r1_xreal_0\ (k10_real_1\ k32_sin_cos\ np_2)\ X0)\wedge(r1_xreal_0\ np_1\ (k17_sin_cos\ X0))))$$