

t22_sin_cos7

(TMTwT9mmeusvogPjiw3HjJzPcTDjsKWnFCN)

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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 $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k10_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((\neg r1_xxreal_0 np_1 (k3_square_1 X0)) \Rightarrow ((\neg r1_xxreal_0 X0 (k4_xcmplx_0 np_1)) \wedge (\neg r1_xxreal_0 np_1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (5)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_1) = np_1 \quad (6)$$

Assume the following.

$$k3_xcmplx_0 \text{ } np_1 \text{ } np_1 = np_1 \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xxreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((r1_xxreal_0 \text{ } np_1 \text{ } X0) \Rightarrow (r1_xxreal_0 \text{ } k6_numbers \text{ } (k10_binop_2 \text{ } (k3_square_1 \text{ } X0) \text{ } np_1))) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(\neg r1_xxreal_0 X0 \text{ } k6_numbers) \wedge (\neg r1_xxreal_0 \text{ } np_1 \text{ } X0) \wedge (r1_xxreal_0 \text{ } (k10_binop_2 \text{ } np_1 \text{ } (k3_square_1 X0)) \text{ } k6_numbers))) \quad (11)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xreal_0 \text{ } (k3_square_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 \text{ } (k10_binop_2 X0 X1) \text{ } k1_numbers) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (20)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((r1_xxreal_0 X0 np_1)\Rightarrow((r1_xxreal_0 X0 k6_numbers)\vee(r1_xxreal_0 k6_numbers (k10_binop_2 np_1 (k3_square_1 X0))))))$$