

t27_sin_cos7

(TMaFbN5mCgWEXCZHdQm6bS8pjBMVLn8FKH)

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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 $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k11_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_binop_2 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ 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. Let $k4_ordinal1 : \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 X0 (k3_xcmplx_0 X1 X2)) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (2)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (3)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_1) = np_1 \quad (4)$$

Assume the following.

$$r1_xxreal_0 np_1 np_1 \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (k19_binop_2 X0 = k4_xcmplx_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k11_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 np_1 (k3_square_1 X0)) \wedge ((\neg r1_xxreal_0 np_1 X1) \wedge (r1_xxreal_0 np_1 (k11_binop_2 (k3_square_1 X0) X1)))))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k3_xcmplx_0 X0 X1)) \quad (10)$$

Assume the following.

$$v6_membered k4_ordinal1 \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xreal_0 (k3_square_1 X0)) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_xcmplx_0 X0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_xcmplx_0 X0 X1 = k3_xcmplx_0 X1 X0) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (k11_binop_2 X0 X1 = k11_binop_2 X1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(v6_membered X0) \Rightarrow (v5_membered X0) \quad (17)$$

Assume the following.

$$\forall X0.(v5_membered X0) \Rightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (v1_int_1 X1)) \quad (18)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 np_1 (k3_square_1 X0)) \wedge ((\neg r1_xxreal_0 np_1 (k3_square_1 X1)) \wedge (k11_binop_2 X0 X1 = k19_binop_2 np_1))))))$$