

t27_sin_cos
(TMdmBiNsWj1B12dVis1aXK4uB8qp1dTr4Gq)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k15_sin_cos : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k1_xcmplx_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k14_sin_cos : \iota \Rightarrow \iota$ be given. Let $k11_comseq_3 : \iota \Rightarrow \iota$ be given. Let $k3_sin_cos : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k13_sin_cos : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$k7_complex1 = k1_xcmplx_0 \quad (2)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 X0) \Rightarrow (k15_sin_cos X0 = k14_sin_cos X0) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (v1_xreal_0 \\ & X1) \Rightarrow ((X0 = X1) \Rightarrow ((k17_complex1 (k11_comseq_3 (k3_sin_cos (k3_xcmplx_0 \\ & X0 k7_complex1))) = np_1) \wedge ((r1_xxreal_0 (k18_complex1 (k1_seq_1 \\ & k16_sin_cos X1)) np_1) \wedge (r1_xxreal_0 (k18_complex1 (k1_seq_1 \\ & k19_sin_cos X1)) np_1)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (5)$$

Assume the following.

$$v1_xcmplx_0 \ k1_xcmplx_0 \quad (6)$$

Assume the following.

$$(v1_funct_1 \ k13_sin_cos) \wedge ((v1_funct_2 \ k13_sin_cos \ k2_numbers \ k2_numbers) \wedge (m1_subset_1 \ k13_sin_cos \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k2_numbers \ k2_numbers)))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Leftrightarrow (X0 \in \ k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (k20_sin_cos \ X0 = k1_seq_1 \ k19_sin_cos \ X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (k17_sin_cos \ X0 = k1_seq_1 \ k16_sin_cos \ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k14_sin_cos \ X0 = k1_funct_1 \ k13_sin_cos \ X0) \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k2_numbers \ k2_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k2_numbers \ k2_numbers)))) \Rightarrow \\ & ((X0 = k13_sin_cos) \Leftrightarrow (\forall X1.(v1_xcmplx_0 \ X1) \Rightarrow (k1_funct_1 \\ & \quad X0 \ X1 = k11_comseq_3 \ (k3_sin_cos \ X1)))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xcmplx_0 \ X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow ((k17_complex1 \ (k15_sin_cos \\ & \quad (k3_xcmplx_0 \ X0 \ k7_complex1)) = np_1) \wedge (\forall X1.(v1_xreal_0 \\ & \quad X1) \Rightarrow ((r1_xreal_0 \ (k18_complex1 \ (k17_sin_cos \ X1)) \ np_1) \wedge (r1_xreal_0 \\ & \quad (k18_complex1 \ (k20_sin_cos \ X1)) \ np_1)))) \end{aligned}$$