

t49_sin_cos4 (TM-
GAUC2qbSVCffE4tza3GcJzBDZQs6HXWoE)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ 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 $np_2 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k2_sin_cos4 : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_sin_cos : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k17_sin_cos \\ & (k7_xcmplx_0 (k2_xcmplx_0 X0 X1) np_2) \neq k6_numbers) \Rightarrow (k7_xcmplx_0 \\ & (k2_xcmplx_0 (k17_sin_cos X0) (k17_sin_cos X1)) (k6_xcmplx_0 \\ & (k20_sin_cos X1) (k20_sin_cos X0)) = k2_sin_cos4 (k7_xcmplx_0 \\ & (k6_xcmplx_0 X0 X1) np_2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow ((k21_sin_cos k6_numbers = np_1) \wedge \\ & ((k18_sin_cos k6_numbers = k6_numbers) \wedge ((k20_sin_cos (k4_xcmplx_0 \\ & X0) = k20_sin_cos X0) \wedge (k17_sin_cos (k4_xcmplx_0 X0) = k4_xcmplx_0 \\ & (k17_sin_cos X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k6_xcmplx_0 \\ & (k17_sin_cos X0) (k17_sin_cos X1) = k3_xcmplx_0 np_2 (k3_xcmplx_0 \\ & (k20_sin_cos (k7_xcmplx_0 (k2_xcmplx_0 X0 X1) np_2)) (k17_sin_cos \\ & (k7_xcmplx_0 (k6_xcmplx_0 X0 X1) np_2)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k2_xcmplx_0 \\ & (k17_sin_cos X0) (k17_sin_cos X1) = k3_xcmplx_0 np_2 (k3_xcmplx_0 \\ & (k20_sin_cos (k7_xcmplx_0 (k6_xcmplx_0 X0 X1) np_2)) (k17_sin_cos \\ & (k7_xcmplx_0 (k2_xcmplx_0 X0 X1) np_2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k6_xcmplx_0 (k4_xcmplx_0 X0) (k4_xcmplx_0 X1) = k6_xcmplx_0 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 (k4_xcmplx_0 X1) = k6_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((v1_xcmplx_0 (k4_xcmplx_0 X0))\wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (10)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(\forall X1.(v1_xreal_0 X1)\Rightarrow((k17_sin_cos (k7_xcmplx_0 (k6_xcmplx_0 X0 X1) np_2)\neq k6_numbers)\Rightarrow(k7_xcmplx_0 (k6_xcmplx_0 (k17_sin_cos X0) (k17_sin_cos X1)) (k6_xcmplx_0 (k20_sin_cos X1) (k20_sin_cos X0)) = k2_sin_cos4 (k7_xcmplx_0 (k2_xcmplx_0 X0 X1) np_2))))))$$