

t42_sin_cos9 (TMdvF-
bevJTEM3DR3S9VWCSRFXuxeiUFVorq)

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Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k30_sin_cos : \iota$ 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 $k6_numbers : \iota$ be given. Let $k2_sin_cos4 : \iota \Rightarrow \iota$ be given. Let $k21_sin_cos : \iota \Rightarrow \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k3_sin_cos6 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k2_sin_cos6 : \iota \Rightarrow \iota$ be given. Let $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_sin_cos6 : \iota$ be given. Assume the following.

$$\begin{aligned}
 & (k21_sin_cos (k10_real_1 k32_sin_cos np_2) = k6_numbers) \wedge ((\\
 & k18_sin_cos (k10_real_1 k32_sin_cos np_2) = np_1) \wedge ((k21_sin_cos \\
 & k32_sin_cos = k1_real_1 np_1) \wedge ((k18_sin_cos k32_sin_cos = k6_numbers) \wedge \\
 & ((k21_sin_cos (k7_real_1 k32_sin_cos (k10_real_1 k32_sin_cos \\
 & np_2)) = k6_numbers) \wedge ((k18_sin_cos (k7_real_1 k32_sin_cos (\\
 & k10_real_1 k32_sin_cos np_2)) = k1_real_1 np_1) \wedge ((k21_sin_cos \\
 & (k8_real_1 np_2 k32_sin_cos) = np_1) \wedge (k18_sin_cos (k8_real_1 \\
 & np_2 k32_sin_cos) = k6_numbers))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& (k1_seq_1 \ k19_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2) = k6_numbers) \wedge \\
& \quad ((k1_seq_1 \ k16_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2) = np_1) \wedge \\
& \quad ((k1_seq_1 \ k19_sin_cos \ k32_sin_cos = k1_real_1 \ np_1) \wedge ((k1_seq_1 \ k16_sin_cos \ k32_sin_cos = k6_numbers) \wedge ((k1_seq_1 \ k19_sin_cos \\
& \quad (k7_real_1 \ k32_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2)) = k6_numbers) \wedge \\
& \quad ((k1_seq_1 \ k16_sin_cos \ (k7_real_1 \ k32_sin_cos \ (k10_real_1 \ k32_sin_cos \\
& \quad np_2)) = k1_real_1 \ np_1) \wedge ((k1_seq_1 \ k19_sin_cos \ (k8_real_1 \\
& \quad np_2 \ k32_sin_cos) = np_1) \wedge (k1_seq_1 \ k16_sin_cos \ (k8_real_1 \\
& \quad np_2 \ k32_sin_cos) = k6_numbers))))))
\end{aligned} \tag{2}$$

Assume the following.

$$k3_sin_cos6 \ np_1 = k10_real_1 \ k32_sin_cos \ np_2 \tag{3}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (X0 = k1_xboole_0) \tag{4}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k7_xcmplx_0 \ X0 \ np_1 = X0) \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow ((k1_seq_1 \ k16_sin_cos \\
& \quad X0 \neq k6_numbers) \Rightarrow (k1_seq_1 \ k30_sin_cos \ X0 = k2_sin_cos4 \ X0))
\end{aligned} \tag{6}$$

Assume the following.

$$k2_xcmplx_0 \ np_1 \ (k4_xcmplx_0 \ np_1) = np_0 \tag{7}$$

Assume the following.

$$k6_numbers = k1_xboole_0 \tag{8}$$

Assume the following.

$$\forall X0.k3_sin_cos6 \ X0 = k2_sin_cos6 \ X0 \tag{9}$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k21_sin_cos \ X0 = k20_sin_cos \ X0) \tag{10}$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k18_sin_cos \ X0 = k17_sin_cos \ X0) \tag{11}$$

Assume the following.

$$\exists X0.(v1_xboole_0 X0) \wedge ((v1_xcmplx_0 X0) \wedge ((v1_xreal_0 X0) \wedge (v1_xreal_0 X0))) \quad (12)$$

Assume the following.

$$k2_xcmplx_0 \text{ np_1} (k4_xcmplx_0 \text{ np_1}) = k6_numbers \quad (13)$$

Assume the following.

$$\forall X0.m1_subset_1 (k3_sin_cos6 X0) k1_numbers \quad (14)$$

Assume the following.

$$\forall X0.k2_sin_cos6 X0 = k1_seq_1 k1_sin_cos6 X0 \quad (15)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k2_sin_cos4 X0 = k7_xcmplx_0 (k20_sin_cos X0) (k17_sin_cos X0)) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (17)$$

Theorem 1

$$(k1_seq_1 k30_sin_cos (k10_real_1 k32_sin_cos \text{ np_2}) = k6_numbers) \wedge (k2_sin_cos4 (k10_real_1 k32_sin_cos \text{ np_2}) = k6_numbers)$$