

t77_sin_cos

(TMHXfQYQeHMtXfypaYxaM1fTJvfR2hcjXdn)

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Let $k21_sin_cos : \iota \Rightarrow \iota$ 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 $k18_sin_cos : \iota \Rightarrow \iota$ 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 $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k16_sin_cos : \iota$ 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 $k31_sin_cos : \iota$ be given. Let $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & (k1_seq_1 \ k19_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2) = k6_numbers) \wedge \\
 & \quad ((k1_seq_1 \ k16_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2) = np_1) \wedge \\
 & \quad \quad ((k1_seq_1 \ k19_sin_cos \ k32_sin_cos = k1_real_1 \ np_1) \wedge ((k1_seq_1 \ k16_sin_cos \ k32_sin_cos = k6_numbers) \wedge ((k1_seq_1 \ k19_sin_cos \\
 & \quad \quad \quad (k7_real_1 \ k32_sin_cos \ (k10_real_1 \ k32_sin_cos \ np_2)) = k6_numbers) \wedge \\
 & \quad \quad \quad ((k1_seq_1 \ k16_sin_cos \ (k7_real_1 \ k32_sin_cos \ (k10_real_1 \ k32_sin_cos \\
 & \quad \quad \quad \quad np_2)) = k1_real_1 \ np_1) \wedge ((k1_seq_1 \ k19_sin_cos \ (k8_real_1 \\
 & \quad \quad \quad \quad np_2 \ k32_sin_cos) = np_1) \wedge (k1_seq_1 \ k16_sin_cos \ (k8_real_1 \\
 & \quad \quad \quad \quad \quad np_2 \ k32_sin_cos) = k6_numbers))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\
 & \quad ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers))
 \end{aligned} \tag{2}$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \tag{3}$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k21_sin_cos \ X0 = k20_sin_cos \ X0) \tag{4}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k18_sin_cos X0 = k17_sin_cos X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k8_real_1 X0 X1) k1_numbers) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k7_real_1 X0 X1) k1_numbers) \quad (7)$$

Assume the following.

$$m1_subset_1 k32_sin_cos k1_numbers \quad (8)$$

Assume the following.

$$v1_xreal_0 k31_sin_cos \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \quad (10)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k20_sin_cos X0 = k1_seq_1 k19_sin_cos X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k17_sin_cos X0 = k1_seq_1 k16_sin_cos X0) \quad (12)$$

Assume the following.

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

Theorem 1

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