

t8_integra8 (TMaK- WQMZgFmVpi9wXWLTvdKEgSVzbJejUCC)

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Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $np_4 : \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $np_1 : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ 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 $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$k18_sin_cos (k10_real_1 k32_sin_cos np_4) = k10_real_1 (k7_square_1 np_2) np_2 \quad (1)$$

Assume the following.

$$\begin{aligned} & (k1_seq_1 k16_sin_cos (k1_real_1 (k10_real_1 k32_sin_cos np_4)) = \\ & k1_real_1 (k10_real_1 np_1 (k7_square_1 np_2))) \wedge ((k1_seq_1 \\ & k19_sin_cos (k1_real_1 (k10_real_1 k32_sin_cos np_4)) = k10_real_1 \\ & np_1 (k7_square_1 np_2)) \wedge ((k1_seq_1 k16_sin_cos (k8_real_1 \\ & (k10_real_1 np_3 np_4) k32_sin_cos) = k10_real_1 np_1 (k7_square_1 \\ & np_2)) \wedge (k1_seq_1 k19_sin_cos (k8_real_1 (k10_real_1 np_3 np_4) \\ & k32_sin_cos) = k1_real_1 (k10_real_1 np_1 (k7_square_1 np_2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & (k1_seq_1 k16_sin_cos (k10_real_1 k32_sin_cos np_4) = k10_real_1 \\ & np_1 (k7_square_1 np_2)) \wedge (k1_seq_1 k19_sin_cos (k10_real_1 \\ & k32_sin_cos np_4) = k10_real_1 np_1 (k7_square_1 np_2)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_4) \wedge (m2_subset_1 np_4 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_4 k5_numbers) \wedge (m1_subset_1 np_4 k1_numbers)) \end{aligned} \quad (4)$$

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.

$$m1_subset_1 k32_sin_cos k1_numbers \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (m1_subset_1 (k1_real_1 X0) k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k17_sin_cos X0 = k1_seq_1 k16_sin_cos X0) \quad (9)$$

Assume the following.

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

Theorem 1

$$k18_sin_cos (k1_real_1 (k10_real_1 k32_sin_cos np_4)) = k1_real_1 (k10_real_1 (k7_square_1 np_2) np_2)$$