

t39_sin_cos9 (TMcY-
tYpQWdA2rrMPbFwYDESfdVusvsBgE3h)

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Let $k5_sin_cos9 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ 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 $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_sin_cos9 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k29_sin_cos : \iota$ be given. Let $k1_sin_cos4 : \iota \Rightarrow \iota$ 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 $k5_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k6_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_sin_cos9 : \iota \Rightarrow \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xxreal_0 X2) \Rightarrow ((X0 \in k4_xxreal_1 X1 X2) \Leftrightarrow ((\neg r1_xxreal_0 X0 X1) \wedge \\ & (\neg r1_xxreal_0 X2 X0)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X0 (k1_real_1 \\ & (k10_real_1 k32_sin_cos np_2)))) \wedge ((\neg r1_xxreal_0 (k10_real_1 \\ & k32_sin_cos np_2) X0) \wedge (\neg(k5_sin_cos9 (k1_seq_1 k29_sin_cos \\ & X0) = X0) \wedge (k5_sin_cos9 (k1_sin_cos4 X0) = X0))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_4) \wedge (m2_subset_1 np_4 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_4 k5_numbers) \wedge (m1_subset_1 np_4 k1_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 np_2) \wedge (m2_subset_1 np_2 k1_numbers k5_numbers)) \wedge \\ & ((m1_subset_1 np_2 k5_numbers) \wedge (m1_subset_1 np_2 k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (m1_subset_1 \ X1 \ k1_numbers)) \Rightarrow (k6_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \quad (6)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k5_sin_cos9 \ X0 = k3_sin_cos9 \ X0) \quad (7)$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (8)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (k2_rcomp_1 \ X0 \ X1 = k4_xxreal_1 \ X0 \ X1) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k10_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \quad (10)$$

Assume the following.

$$k10_real_1 \ k32_sin_cos \ np_4 \in k2_rcomp_1 \ (k1_real_1 \ (k10_real_1 \ k32_sin_cos \ np_2)) \ (k10_real_1 \ k32_sin_cos \ np_2) \quad (11)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (v1_xreal_0 \ (k7_xcmplx_0 \ X0 \ X1)) \quad (12)$$

Assume the following.

$$m1_subset_1 \ k32_sin_cos \ k1_numbers \quad (13)$$

Assume the following.

$$v1_xreal_0 \ k31_sin_cos \quad (14)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (m1_subset_1 \ (k1_real_1 \ X0) \ k1_numbers) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k1_numbers)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(k3_sin_cos9 X0 = k1_seq_1 k1_sin_cos9 X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow((X0 = k31_sin_cos)\Leftrightarrow((k1_seq_1 k29_sin_cos (k6_real_1 X0 np_4) = np_1)\wedge(X0 \in k2_rcomp_1 k6_numbers np_4))) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xxreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (20)$$

Theorem 1

$$(k5_sin_cos9 np_1 = k10_real_1 k32_sin_cos np_4)\wedge(k1_seq_1 k1_sin_cos9 np_1 = k10_real_1 k32_sin_cos np_4)$$