

t71_sin_cos6

(TMKxWse719kKnmSfxTpRYuSVcJab5i8WXj6)

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Let $k3_sin_cos6 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ 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 $np_2 : \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $k2_sin_cos6 : \iota \Rightarrow \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_sin_cos6 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge (\neg v3_xxreal_0 X1) \wedge (\neg v2_xxreal_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (((r1_xxreal_0 (k1_real_1 (k10_real_1 k32_sin_cos np_2)) X0) \wedge (r1_xxreal_0 X0 (k10_real_1 k32_sin_cos np_2))) \Rightarrow (k3_sin_cos6 (k17_sin_cos X0) = X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k7_xcmplx_0 k6_numbers X0 = k6_numbers) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((k21_sin_cos k6_numbers = np_1) \wedge ((k18_sin_cos k6_numbers = k6_numbers) \wedge ((k20_sin_cos (k4_xcmplx_0 X0) = k20_sin_cos X0) \wedge (k17_sin_cos (k4_xcmplx_0 X0) = k4_xcmplx_0 (k17_sin_cos X0)))))) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (7)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0. k3_sin_cos6 \ X0 = k2_sin_cos6 \ X0 \quad (10)$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ X0 = k4_xcmplx_0 \ X0) \quad (12)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k18_sin_cos \ X0 = k17_sin_cos \ X0) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (k10_real_1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (k4_xcmplx_0 \ (k4_xcmplx_0 \ X0) = X0) \quad (15)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow ((v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \wedge (v1_xreal_0 \ (k4_xcmplx_0 \ X0))) \quad (16)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v3_xreal_0 \ X0) \wedge (v1_xreal_0 \ X0)) \wedge \\ & ((\neg v3_xreal_0 \ X1) \wedge (v1_xreal_0 \ X1))) \Rightarrow (\neg v3_xreal_0 \ (k7_xcmplx_0 \ X0 \ X1)) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v3_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \wedge \\ & ((\neg v2_xxreal_0 X1) \wedge (v1_xreal_0 X1))) \Rightarrow (\neg v2_xxreal_0 (k7_xcmplx_0 \\ & X0 X1)) \end{aligned} \tag{18}$$

Assume the following.

$$(v1_xreal_0 k31_sin_cos) \wedge (v2_xxreal_0 k31_sin_cos) \tag{19}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v3_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow ((v1_xcmplx_0 \\ & (k4_xcmplx_0 X0)) \wedge (\neg v2_xxreal_0 (k4_xcmplx_0 X0))) \end{aligned} \tag{20}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow ((v1_xcmplx_0 \\ & (k4_xcmplx_0 X0)) \wedge (\neg v3_xxreal_0 (k4_xcmplx_0 X0))) \end{aligned} \tag{21}$$

Assume the following.

$$m1_subset_1 k32_sin_cos k1_numbers \tag{22}$$

Assume the following.

$$v1_xreal_0 k31_sin_cos \tag{23}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 \\ & X1)) \Rightarrow (m1_subset_1 (k10_real_1 X0 X1) k1_numbers) \end{aligned} \tag{24}$$

Assume the following.

$$\forall X0. k2_sin_cos6 X0 = k1_seq_1 k1_sin_cos6 X0 \tag{25}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_xxreal_0 X0) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 \\ & X0))) \Rightarrow ((v1_xboole_0 X0) \wedge (v1_xxreal_0 X0)) \end{aligned} \tag{26}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_xxreal_0 X0) \wedge (v3_xxreal_0 X0)) \Rightarrow ((\neg v1_xboole_0 \\ & X0) \wedge ((v1_xxreal_0 X0) \wedge (\neg v2_xxreal_0 X0))) \end{aligned} \tag{27}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \tag{28}$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \tag{29}$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{30}$$

Theorem 1 $k3_sin_cos6 k6_numbers = k6_numbers$.