

t64_sin_cos9
(TMYTP2oPtKrV1GxqjPwKEbG84ef5H1SB8eH)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ 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 $k6_sin_cos9 : \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_sin_cos6 : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_sin_cos9 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k30_sin_cos : \iota$ be given. Let $np_2 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_sin_cos4 : \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_sin_cos9 : \iota \Rightarrow \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$k1_relset_1 \ k1_numbers \ k4_sin_cos6 = k1_rcomp_1 \ (k1_real_1 \ np_1) \ np_1 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (X0 \in k1_rcomp_1 \ (k1_real_1 \ np_1) \ np_1) \Rightarrow (k1_seq_1 \\ k2_sin_cos9 \ X0 \in k1_rcomp_1 \ (k10_real_1 \ k32_sin_cos \ np_4) \ (k8_real_1 \\ (k10_real_1 \ np_3 \ np_4) \ k32_sin_cos)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1_xxreal_0 \ X0) \Rightarrow (\forall X1. (v1_xxreal_0 \ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 \ X2) \Rightarrow ((X0 \in k4_xxreal_1 \ X1 \ X2) \Leftrightarrow ((\neg r1_xxreal_0 \ X0 \ X1) \wedge \\ (\neg r1_xxreal_0 \ X2 \ X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 X2))) \Rightarrow (m1_subset_1 X0 X2) \quad (4)$$

Assume the following.

$$(k1_seq_1 k30_sin_cos (k10_real_1 k32_sin_cos np_2) = k6_numbers) \wedge (k2_sin_cos4 (k10_real_1 k32_sin_cos np_2) = k6_numbers) \quad (5)$$

Assume the following.

$$(k6_sin_cos9 (k1_real_1 np_1) = k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos) \wedge (k1_seq_1 k2_sin_cos9 (k1_real_1 np_1) = k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos) \quad (6)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (\neg(\neg r1_xxreal_0 X0 k6_numbers) \wedge ((\neg r1_xxreal_0 k32_sin_cos X0) \wedge (\neg(k6_sin_cos9 (k1_seq_1 k30_sin_cos X0) = X0) \wedge (k6_sin_cos9 (k2_sin_cos4 X0) = X0)))) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge (r1_xxreal_0 X0 X2)))))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (9)$$

Assume the following.

$$(k1_seq_1 k30_sin_cos (k10_real_1 k32_sin_cos np_4) = np_1) \wedge ((k2_sin_cos4 (k10_real_1 k32_sin_cos np_4) = np_1) \wedge ((k1_seq_1 k30_sin_cos (k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos) = k1_real_1 np_1) \wedge (k2_sin_cos4 (k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos) = k1_real_1 np_1))) \quad (10)$$

Assume the following.

$$((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \quad (11)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k6_sin_cos9 X0 = k4_sin_cos9 X0) \quad (12)$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0 X0)\wedge(v1_xxreal_0 X1))\Rightarrow(k2_rcomp_1 X0 X1 = k4_xxreal_1 X0 X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v4_relat_1 X1 X0))\Rightarrow(k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(k1_rcomp_1 X0 X1 = k1_xxreal_1 X0 X1) \quad (16)$$

Assume the following.

$$k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos \in k2_rcomp_1 k6_numbers k32_sin_cos \quad (17)$$

Assume the following.

$$k10_real_1 k32_sin_cos np_4 \in k2_rcomp_1 k6_numbers k32_sin_cos \quad (18)$$

Assume the following.

$$v3_membered k1_numbers \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(m1_subset_1 (k6_sin_cos9 X0) k1_numbers) \quad (20)$$

Assume the following.

$$(v1_funct_1 k4_sin_cos6)\wedge(m1_subset_1 k4_sin_cos6 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))) \quad (21)$$

Assume the following.

$$v1_xreal_0 k31_sin_cos \quad (22)$$

Assume the following.

$$(v1_funct_1 k30_sin_cos)\wedge(m1_subset_1 k30_sin_cos (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0)\wedge(v1_xreal_0 X1))\Rightarrow(m1_subset_1 (k2_rcomp_1 X0 X1) (k1_zfmisc_1 k1_numbers)) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v3_valued_0 X0)))\Rightarrow(m1_subset_1 (k1_seq_1 X0 X1) k1_numbers) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(k4_sin_cos9 X0 = k1_seq_1 k2_sin_cos9 X0) \quad (26)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))\Rightarrow(v3_membered X0) \quad (27)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xreal_0 X0) \quad (28)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(v2_membered X0) \quad (29)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v5_relat_1 X0 k1_numbers))\Rightarrow((v1_relat_1 X0)\wedge(v3_valued_0 X0)) \quad (30)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow((v4_relat_1 X2 X0)\wedge(v5_relat_1 X2 X1)) \quad (31)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (32)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(v1_relat_1 X2) \quad (33)$$

Assume the following.

$$\forall X0.(v3_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (34)$$

Assume the following.

$$\forall X0.(v2_membered X0)\Rightarrow(\forall X1.(m1_subset_1 X1 X0)\Rightarrow(v1_xreal_0 X1)) \quad (35)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (((r1_xxreal_0 (k1_real_1 np_1) X0) \wedge (r1_xxreal_0 X0 np_1)) \Rightarrow ((r1_xxreal_0 (k10_real_1 k32_sin_cos np_4) (k6_sin_cos9 X0)) \wedge (r1_xxreal_0 (k6_sin_cos9 X0) (k8_real_1 (k10_real_1 np_3 np_4) k32_sin_cos))))))$$