

t49_sincos10
(TMbq5Xs1Ds4np6uLrgeQ9yURFscRcT7y3Lt)

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Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_sincos10 : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fdiff_9 : \iota$ be given. Let $k6_numbers : \iota$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (k5_relat_1 (k5_relat_1 X2 X1) X0 = k5_relat_1 X2 X0)) \quad (1)$$

Assume the following.

$$k2_relset_1 k1_numbers (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k1_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_4))) = k1_rcomp_1 np_1 (k7_square_1 np_2) \quad (2)$$

Assume the following.

$$k2_relset_1 k1_numbers k1_sincos10 = k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2) \quad (3)$$

Assume the following.

$$v2_funct_1 (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v2_funct_1 X1)))\Rightarrow(k2_funct_1 (k5_relat_1 X1 X0) = k5_relat_1 (k2_funct_1 X1) (k7_relat_1 X1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow(k10_xtuple_0 (k5_relat_1 X1 X0) = k7_relat_1 X1 X0) \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))\Rightarrow(k2_partfun2 X0 X1 X2 = k2_funct_1 X2) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (11)$$

Assume the following.

$$k2_funct_1 k1_sincos10 = k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)) \quad (12)$$

Assume the following.

$$r1_tarski (k1_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_4)) (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)) \quad (13)$$

Assume the following.

$$v2_funct_1 (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k1_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_4))) \quad (14)$$

Assume the following.

$$(v1_relat_1 (k5_relat_1 k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)))) \wedge (v2_funct_1 (k5_relat_1 k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)))) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow ((v1_funct_1 (k2_partfun1 X0 X1 X2 X3)) \wedge (m1_subset_1 (k2_partfun1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \quad (16)$$

Assume the following.

$$(v1_funct_1 k1_sincos10) \wedge (m1_subset_1 k1_sincos10 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))) \quad (17)$$

Assume the following.

$$(v1_funct_1 k1_fdiff_9) \wedge (m1_subset_1 k1_fdiff_9 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))) \quad (18)$$

Assume the following.

$$k1_sincos10 = k2_partfun2 k1_numbers k1_numbers (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2))) \quad (19)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow ((v4_relat_1 X2 X0) \wedge (v5_relat_1 X2 X1)) \quad (20)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (21)$$

Theorem 1

$$k2_partfun1 k1_numbers k1_numbers k1_sincos10 (k1_rcomp_1 np_1 (k7_square_1 np_2)) = k2_partfun2 k1_numbers k1_numbers (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k1_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_4)))$$