

t84_sincos10 (TMPT- cAnkK2X4UaGH71wbmagVpDyULGeRFbW)

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Let $v6_valued_0 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k4_sincos10 : \iota$ 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 $k7_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_fdiff_9 : \iota$ be given. Let $k4_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k6_sin_cos9 : \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_sin_cos9 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k2_reset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k31_sin_cos : \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$v6_valued_0 (k2_partfun1 k1_numbers k1_numbers k4_sincos10 (k7_reset_1 k1_numbers k1_numbers k2_fdiff_9 (k4_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)))) \quad (1)$$

Assume the following.

$$(k6_sin_cos9 k6_numbers = k10_real_1 k32_sin_cos np_2) \wedge (k1_seq_1 k2_sin_cos9 k6_numbers = k10_real_1 k32_sin_cos np_2) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v2_funct_1 X0) \Rightarrow ((k10_xtuple_0 X0 = k9_xtuple_0 (k2_funct_1 X0)) \wedge (k9_xtuple_0 X0 = k10_xtuple_0 (k2_funct_1 X0)))) \quad (3)$$

Assume the following.

$$k2_reset_1 k1_numbers k4_sincos10 = k4_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1)\Rightarrow(k10_xtuple_0 (k5_relat_1 X1 X0) = k7_relat_1 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k7_relset_1 X0 X1 X2 X3 = k7_relat_1 X2 X3) \quad (6)$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge(v5_relat_1 X1 X0))\Rightarrow(k2_relset_1 X0 X1 = k10_xtuple_0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (9)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0)\Rightarrow(k5_relat_1 X0 (k9_xtuple_0 X0) = X0) \quad (10)$$

Assume the following.

$$k2_funct_1 k4_sincos10 = k2_partfun1 k1_numbers k1_numbers k2_fdiff_9 (k4_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)) \quad (11)$$

Assume the following.

$$(v1_funct_1 k4_sincos10)\wedge(v2_funct_1 k4_sincos10) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_funct_1 X0)\wedge((v6_valued_0 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))\Rightarrow((v1_funct_1 (k5_relat_1 X0 X1))\wedge(v6_valued_0 (k5_relat_1 X0 X1))) \quad (13)$$

Assume the following.

$$(v1_funct_1 k4_sincos10)\wedge(m1_subset_1 k4_sincos10 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))) \quad (14)$$

Assume the following.

$$(v1_funct_1 \ k2_fdiff_9) \wedge (m1_subset_1 \ k2_fdiff_9 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers))) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow ((v4_relat_1 \ X2 \ X0) \wedge (v5_relat_1 \ X2 \ X1)) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (17)$$

Theorem 1

$$v6_valued_0 \ (k2_partfun1 \ k1_numbers \ k1_numbers \ k4_sincos10 \ (k1_rcomp_1 \ np_1 \ (k7_square_1 \ np_2)))$$