

t105_sin_cos6

(TMY95vPGtL13E8Dq6CXfmWPEHWcY3dEX7Dk)

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Let $v6_valued_0 : \iota \Rightarrow o$ be given. Let $k5_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k4_sin_cos6 : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ 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 $k2_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$k7_relset_1 k1_numbers k1_numbers k19_sin_cos (k1_rcomp_1 k6_numbers k32_sin_cos) = k1_rcomp_1 (k1_real_1 np_1) np_1 \quad (2)$$

Assume the following.

$$v6_valued_0 (k2_partfun1 k1_numbers k1_numbers k19_sin_cos (k1_rcomp_1 k6_numbers k32_sin_cos)) \quad (3)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (r1_tarski X1 X2) \Rightarrow (k7_relat_1 (k5_relat_1 X0 X2) X1 = k7_relat_1 X0 X1)) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1)\wedge((v2_funct_1 X1)\wedge(m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow((v6_valued_0 \\ & (k2_partfun1 k1_numbers k1_numbers X1 X0))\Rightarrow(v6_valued_0 (k2_partfun1 \\ & k1_numbers k1_numbers (k2_partfun2 k1_numbers k1_numbers (k2_partfun1 \\ & k1_numbers k1_numbers X1 X0)) (k7_relset_1 k1_numbers k1_numbers \\ & X1 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k7_relset_1 X0 X1 X2 X3 = k7_relat_1 \\ & X2 X3) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k5_relset_1 X0 X1 X2 X3 = k5_relat_1 \\ & X2 X3) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 \\ & (k5_relat_1 X0 X1))\wedge(v1_funct_1 (k5_relat_1 X0 X1))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & (v1_relat_1 (k5_relat_1 k19_sin_cos (k1_rcomp_1 k6_numbers k32_sin_cos)))\wedge \\ & (v2_funct_1 (k5_relat_1 k19_sin_cos (k1_rcomp_1 k6_numbers k32_sin_cos))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(m1_subset_1 (k5_relset_1 \\ & X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k4_sin_cos6)\wedge(m1_subset_1 k4_sin_cos6 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers))) \end{aligned} \quad (13)$$

Assume the following.

$$(v1_funct_1 \ k19_sin_cos) \wedge ((v1_funct_2 \ k19_sin_cos \ k1_numbers \ k1_numbers) \wedge (m1_subset_1 \ k19_sin_cos \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers)))) \quad (14)$$

Assume the following.

$$k4_sin_cos6 = k2_partfun2 \ k1_numbers \ k1_numbers \ (k5_relset_1 \ k1_numbers \ k1_numbers \ k19_sin_cos \ (k1_rcomp_1 \ k6_numbers \ k32_sin_cos)) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1_subset_1 \ X2 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ X0 \ X1))) \Rightarrow (v1_relat_1 \ X2) \quad (16)$$

Theorem 1

$$v6_valued_0 \ (k5_relset_1 \ k1_numbers \ k1_numbers \ k4_sin_cos6 \ (k1_rcomp_1 \ (k1_real_1 \ np_1) \ np_1))$$