

t77_sincos10

(TMG88nLZhWat6mda9VchQ3Nv6cRrEpX4uBw)

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Let $v5_valued_0 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_sincos10 : \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_fdiff_9 : \iota$ be given. Let $k3_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $np_2 : \iota$ 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 $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_1 : \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v2_funct_1 X1) \wedge (m1_subset_1 \\ & X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow ((v5_valued_0 \\ & (k2_partfun1 k1_numbers k1_numbers X1 X0)) \Rightarrow (v5_valued_0 (k2_partfun1 \\ & k1_numbers k1_numbers (k2_partfun2 k1_numbers k1_numbers (k2_partfun1 \\ & k1_numbers k1_numbers X1 X0)) (k7_relset_1 k1_numbers k1_numbers \\ & X1 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow ((r1_tarski \\ & X0 X1) \Rightarrow (k5_relat_1 (k5_relat_1 X2 X0) X1 = k5_relat_1 X2 X0)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & v2_funct_1 (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 \\ & k6_numbers (k10_real_1 k32_sin_cos np_2))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & v5_valued_0 (k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 \\ & k6_numbers (k10_real_1 k32_sin_cos np_2))) \end{aligned} \tag{4}$$

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.

$$\forall X0.\forall X1.r1_tarski X0 X0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))\Rightarrow(k7_relset_1 X0 X1 X2 X3 = k7_relat_1 X2 X3) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_funct_1 X2)\wedge((v2_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))\Rightarrow(k2_partfun2 X0 X1 X2 = k2_funct_1 X2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow(k2_partfun1 X0 X1 X2 X3 = k5_relat_1 X2 X3) \quad (10)$$

Assume the following.

$$k2_funct_1 k1_sincos10 = k2_partfun1 k1_numbers k1_numbers k1_fdiff_9 (k3_rcomp_1 k6_numbers (k10_real_1 k32_sin_cos np_2)) \quad (11)$$

Assume the following.

$$(v1_funct_1 k1_sincos10)\wedge(v2_funct_1 k1_sincos10) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))))\Rightarrow((v1_funct_1 (k2_partfun1 X0 X1 X2 X3))\wedge(m1_subset_1 (k2_partfun1 X0 X1 X2 X3) (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \quad (13)$$

Assume the following.

$$(v1_funct_1 \ k1_sincos10) \wedge (m1_subset_1 \ k1_sincos10 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers))) \quad (14)$$

Assume the following.

$$(v1_funct_1 \ k1_fdiff_9) \wedge (m1_subset_1 \ k1_fdiff_9 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k1_numbers \ k1_numbers))) \quad (15)$$

Assume the following.

$$k1_sincos10 = k2_partfun2 \ k1_numbers \ k1_numbers \ (k2_partfun1 \ k1_numbers \ k1_numbers \ k1_fdiff_9 \ (k3_rcomp_1 \ k6_numbers \ (k10_real_1 \ k32_sin_cos \ np_2))) \quad (16)$$

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

$$v5_valued_0 \ (k2_partfun1 \ k1_numbers \ k1_numbers \ k1_sincos10 \ (k7_relset_1 \ k1_numbers \ k1_numbers \ k1_fdiff_9 \ (k3_rcomp_1 \ k6_numbers \ (k10_real_1 \ k32_sin_cos \ np_2))))$$