

t57_sin_cos6 (TMMmNJWVCnZpRGzu-
atTVswuoTGpE9iGR8UP)

October 27, 2020

Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $k5_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k1_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ 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 $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ 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 $v5_valued_0 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_valued_0 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers))) \Rightarrow (((v5_valued_0 (k2_partfun1 \\ & k1_numbers k1_numbers X1 X0)) \vee (v6_valued_0 (k2_partfun1 k1_numbers \\ & k1_numbers X1 X0))) \Rightarrow (v2_funct_1 (k2_partfun1 k1_numbers k1_numbers \\ & X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_int_1 X0) \Rightarrow (v5_valued_0 (k5_relset_1 k1_numbers \\ & k1_numbers k16_sin_cos (k1_rcomp_1 (k7_real_1 (k1_real_1 (k10_real_1 \\ & k32_sin_cos np_2)) (k8_real_1 (k8_real_1 np_2 k32_sin_cos) \\ & X0)) (k7_real_1 (k10_real_1 k32_sin_cos np_2) (k8_real_1 (k8_real_1 \\ & np_2 k32_sin_cos) X0)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1_subset_1 X2 (\\ & k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (k5_relset_1 X0 X1 X2 X3 = k5_relat_1 \\ & X2 X3) \end{aligned} \tag{3}$$

Assume the following.

$$k32_sin_cos = k31_sin_cos \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k16_sin_cos) \wedge ((v1_funct_2 k16_sin_cos k1_numbers \\ & k1_numbers) \wedge (m1_subset_1 k16_sin_cos (k1_zfmisc_1 (k2_zfmisc_1 \\ & k1_numbers k1_numbers)))) \end{aligned} \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v1_int_1 X0) \Rightarrow (v2_funct_1 (k5_relset_1 k1_numbers \\ & k1_numbers k16_sin_cos (k1_rcomp_1 (k7_real_1 (k1_real_1 (k10_real_1 \\ & k32_sin_cos np_2)) (k8_real_1 (k8_real_1 np_2 k32_sin_cos) \\ & X0)) (k7_real_1 (k10_real_1 k32_sin_cos np_2) (k8_real_1 (k8_real_1 \\ & np_2 k32_sin_cos) X0)))))) \end{aligned}$$