

l6_sin_cos3 (TMSB4xKa7kTEcYw4hdKhrmBMkX1Zeon2d3H)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k10_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k4_sin_cos3 : \iota$ be given. Let $k6_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15_sin_cos : \iota \Rightarrow \iota$ be given. Let $k1_binop_2 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge ((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge (\\ & m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k10_funct_2 \\ & X0 X1 X2 X3 = k7_partfun1 X1 X2 X3) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1_xboole_0 X0) \wedge \\ & ((\neg v1_xboole_0 X1) \wedge (((v1_funct_1 X2) \wedge ((v1_funct_2 X2 X0 X1) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \wedge (m1_subset_1 \\ & X3 X0)))) \Rightarrow (k7_partfun1 X1 X2 X3 = k3_funct_2 X0 X1 X2 X3) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1_xboole_0 k2_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k4_sin_cos3) \wedge ((v1_funct_2 k4_sin_cos3 k2_numbers \\ & k2_numbers) \wedge (m1_subset_1 k4_sin_cos3 (k1_zfmisc_1 (k2_zfmisc_1 \\ & k2_numbers k2_numbers)))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 \ k2_numbers \ k2_numbers) \wedge \\
& (m1_subset_1 X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k2_numbers \ k2_numbers)))))) \Rightarrow \\
& ((X0 = k4_sin_cos3) \Leftrightarrow (\forall X1.(m1_subset_1 X1 \ k2_numbers) \Rightarrow \\
& (k3_funct_2 \ k2_numbers \ k2_numbers \ X0 \ X1 = k6_binop_2 \ (k3_binop_2 \\
& \quad (k15_sin_cos \ X1) \ (k15_sin_cos \ (k1_binop_2 \ X1))) \ np_2)))
\end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Leftrightarrow (X0 \in k2_numbers) \tag{7}$$

Theorem 1

$$\begin{aligned}
& \forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k10_funct_2 \ k2_numbers \ k2_numbers \\
& k4_sin_cos3 \ X0 = k6_binop_2 \ (k3_binop_2 \ (k15_sin_cos \ X0) \ (k15_sin_cos \\
& \quad (k1_binop_2 \ X0))) \ np_2)
\end{aligned}$$