

t64\_sin\_cos6 (TMK-  
fWFnTc5kcVXdo82f8VwGqwoBALhm95xz)

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Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_sin\_cos6 : \iota$  be given. Let  $k5\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_real\_1 : \iota \Rightarrow \iota$  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  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  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  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v2\_funct\_1 X0) \Rightarrow \\ & ((k3\_relat\_1 X0 (k2\_funct\_1 X0) = k4\_relat\_1 (k9\_xtuple\_0 X0)) \wedge \\ & (k3\_relat\_1 (k2\_funct\_1 X0) X0 = k4\_relat\_1 (k10\_xtuple\_0 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & k10\_xtuple\_0 (k2\_partfun1 k1\_numbers k1\_numbers k16\_sin\_cos \\ & (k1\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) (k10\_real\_1 \\ & k32\_sin\_cos np\_2))) = k1\_rcomp\_1 (k1\_real\_1 np\_1) np\_1 \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. k6\_partfun1 X0 = k4\_relat\_1 X0 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset\_1 X2 ( \\ & k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (k5\_relset\_1 X0 X1 X2 X3 = k5\_relat\_1 \\ & X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2)\wedge((v2\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))\Rightarrow(k2\_partfun2 X0 X1 X2 = k2\_funct\_1 X2) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (6)$$

Assume the following.

$$\begin{aligned} & (v1\_relat\_1 (k5\_relat\_1 k16\_sin\_cos (k1\_rcomp\_1 (k1\_real\_1 ( \\ & k10\_real\_1 k32\_sin\_cos np\_2)) (k10\_real\_1 k32\_sin\_cos np\_2))))\wedge \\ & (v2\_funct\_1 (k5\_relat\_1 k16\_sin\_cos (k1\_rcomp\_1 (k1\_real\_1 ( \\ & k10\_real\_1 k32\_sin\_cos np\_2)) (k10\_real\_1 k32\_sin\_cos np\_2)))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \quad (8)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k16\_sin\_cos)\wedge((v1\_funct\_2 k16\_sin\_cos k1\_numbers \\ & k1\_numbers)\wedge(m1\_subset\_1 k16\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k1\_numbers k1\_numbers)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & k1\_sin\_cos6 = k2\_partfun2 k1\_numbers k1\_numbers (k5\_relset\_1 \\ & k1\_numbers k1\_numbers k16\_sin\_cos (k1\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 \\ & k32\_sin\_cos np\_2)) (k10\_real\_1 k32\_sin\_cos np\_2))) \end{aligned} \quad (10)$$

**Theorem 1**

$$\begin{aligned} & k3\_relat\_1 k1\_sin\_cos6 (k5\_relset\_1 k1\_numbers k1\_numbers k16\_sin\_cos \\ & (k1\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) (k10\_real\_1 \\ & k32\_sin\_cos np\_2))) = k6\_partfun1 (k1\_rcomp\_1 (k1\_real\_1 np\_1) \\ & np\_1) \end{aligned}$$