

t82\_sincos10  
(TMKsfUPofRkbg5ua8e9DUfo9qdpFzApcTcD)

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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  $k2\_sincos10 : \iota$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k7\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_fdiff\_9 : \iota$  be given. Let  $k4\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k32\_sin\_cos : \iota$  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  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_reset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k31\_sin\_cos : \iota$  be given. Assume the following.

$$v5\_valued\_0 (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k2\_sincos10\ (k7\_reset\_1\ k1\_numbers\ k1\_numbers\ k1\_fdiff\_9\ (k4\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_2)\ k32\_sin\_cos))) \quad (1)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v2\_funct\_1\ X0) \Rightarrow ((k10\_xtuple\_0\ X0 = k9\_xtuple\_0\ (k2\_funct\_1\ X0)) \wedge (k9\_xtuple\_0\ X0 = k10\_xtuple\_0\ (k2\_funct\_1\ X0)))) \quad (2)$$

Assume the following.

$$k2\_reset\_1\ k1\_numbers\ k2\_sincos10 = k4\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_2)\ k32\_sin\_cos \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1\ X1) \Rightarrow (k10\_xtuple\_0\ (k5\_relat\_1\ X1\ X0) = k7\_relat\_1\ X1\ X0) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 X2 X3) \quad (5)$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0)\Rightarrow(k5\_relat\_1 X0 (k9\_xtuple\_0 X0) = X0) \quad (8)$$

Assume the following.

$$k2\_funct\_1 k2\_sincos10 = k2\_partfun1 k1\_numbers k1\_numbers k1\_fdiff\_9 (k4\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_2) k32\_sin\_cos) \quad (9)$$

Assume the following.

$$(v1\_funct\_1 k2\_sincos10)\wedge(v2\_funct\_1 k2\_sincos10) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1 X0)\wedge((v5\_valued\_0 X0)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))\Rightarrow((v1\_funct\_1 (k5\_relat\_1 X0 X1))\wedge(v5\_valued\_0 (k5\_relat\_1 X0 X1))) \quad (11)$$

Assume the following.

$$(v1\_funct\_1 k2\_sincos10)\wedge(m1\_subset\_1 k2\_sincos10 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (12)$$

Assume the following.

$$(v1\_funct\_1 k1\_fdiff\_9)\wedge(m1\_subset\_1 k1\_fdiff\_9 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (14)$$

**Theorem 1**

$$v5\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers k2\_sincos10 (k1\_rcomp\_1 (k1\_real\_1 (k7\_square\_1 np\_2)) (k1\_real\_1 np\_1)))$$