

## t52\_sincos10

(TMVPB8y5pgTmiKB8oyvQBbLCZ5nRQQWwFr3)

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Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_sincos10 : \iota$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k7\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k2\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_fdiff\_9 : \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $np\_4 : \iota$  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  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k4\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (k5\_relat\_1 (k5\_relat\_1 X2 X1) X0 = k5\_relat\_1 X2 X0)) \quad (1)$$

Assume the following.

$$k2\_relset\_1 k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers k2\_fdiff\_9 (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k10\_real\_1 k32\_sin\_cos np\_2))) = k1\_rcomp\_1 np\_1 (k7\_square\_1 np\_2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v2\_funct\_1 X1))) \Rightarrow (k2\_funct\_1 (k5\_relat\_1 X1 X0) = k5\_relat\_1 (k2\_funct\_1 X1) (k7\_relat\_1 X1 X0)) \quad (3)$$

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.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v5\_relat\_1 X1 X0))\Rightarrow(k2\_relset\_1 X0 X1 = k10\_xtuple\_0 X1) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2)\wedge((v2\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))\Rightarrow(k2\_partfun2 X0 X1 X2 = k2\_funct\_1 X2) \quad (6)$$

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.

$$r1\_tarski (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k10\_real\_1 k32\_sin\_cos np\_2)) (k4\_rcomp\_1 k6\_numbers (k10\_real\_1 k32\_sin\_cos np\_2)) \quad (8)$$

Assume the following.

$$v2\_funct\_1 (k2\_partfun1 k1\_numbers k1\_numbers k2\_fdiff\_9 (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k10\_real\_1 k32\_sin\_cos np\_2))) \quad (9)$$

Assume the following.

$$(v1\_relat\_1 (k5\_relat\_1 k2\_fdiff\_9 (k4\_rcomp\_1 k6\_numbers (k10\_real\_1 k32\_sin\_cos np\_2))))\wedge(v2\_funct\_1 (k5\_relat\_1 k2\_fdiff\_9 (k4\_rcomp\_1 k6\_numbers (k10\_real\_1 k32\_sin\_cos np\_2)))) \quad (10)$$

Assume the following.

$$(v1\_relat\_1 (k5\_relat\_1 k2\_fdiff\_9 (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k10\_real\_1 k32\_sin\_cos np\_2))))\wedge(v2\_funct\_1 (k5\_relat\_1 k2\_fdiff\_9 (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k10\_real\_1 k32\_sin\_cos np\_2)))) \quad (11)$$

Assume the following.

$$(v1\_funct\_1 k4\_sincos10)\wedge(m1\_subset\_1 k4\_sincos10 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (12)$$

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.

$$(v1\_funct\_1 \ k2\_fdiff\_9) \wedge (m1\_subset\_1 \ k2\_fdiff\_9 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k1\_numbers \ k1\_numbers))) \quad (14)$$

Assume the following.

$$k4\_sincos10 = k2\_partfun2 \ k1\_numbers \ k1\_numbers \ (k2\_partfun1 \ k1\_numbers \ k1\_numbers \ k2\_fdiff\_9 \ (k4\_rcomp\_1 \ k6\_numbers \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2))) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1))) \Rightarrow ((v4\_relat\_1 \ X2 \ X0) \wedge (v5\_relat\_1 \ X2 \ X1)) \quad (16)$$

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**

$$k2\_partfun1 \ k1\_numbers \ k1\_numbers \ k4\_sincos10 \ (k1\_rcomp\_1 \ np\_1 \ (k7\_square\_1 \ np\_2)) = k2\_partfun2 \ k1\_numbers \ k1\_numbers \ (k2\_partfun1 \ k1\_numbers \ k1\_numbers \ k2\_fdiff\_9 \ (k1\_rcomp\_1 \ (k10\_real\_1 \ k32\_sin\_cos \ np\_4) \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2)))$$