

t46\_sin\_cos9 (TMGfvip-  
bvN9rWXR9EKevPZR3xES69nAtHa4)

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Let  $v6\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_sin\_cos9 : \iota$  be given. Let  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k30\_sin\_cos : \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k32\_sin\_cos : \iota$  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  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$v6\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers k30\_sin\_cos (k2\_rcomp\_1 k6\_numbers k32\_sin\_cos)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1 X2) \Rightarrow ((r1\_tarski X0 X1) \Rightarrow (k5\_relat\_1 (k5\_relat\_1 X2 X0) X1 = k5\_relat\_1 X2 X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 X1) \Rightarrow (k10\_xtuple\_0 (k5\_relat\_1 X1 X0) = k7\_relat\_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1 X1) \wedge ((v2\_funct\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))))) \Rightarrow ((v6\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers X1 X0)) \Rightarrow (v6\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers (k2\_partfun2 k1\_numbers k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers X1 X0)) (k7\_relset\_1 k1\_numbers k1\_numbers X1 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski X0 X0 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 X2 X3) \quad (6)$$

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.

$$(v1\_relat\_1 (k5\_relat\_1 k30\_sin\_cos (k2\_rcomp\_1 k6\_numbers k32\_sin\_cos)))\wedge(v2\_funct\_1 (k5\_relat\_1 k30\_sin\_cos (k2\_rcomp\_1 k6\_numbers k32\_sin\_cos))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 X0)\Rightarrow(v1\_relat\_1 (k5\_relat\_1 X0 X1)) \quad (9)$$

Assume the following.

$$(v1\_funct\_1 k30\_sin\_cos)\wedge(m1\_subset\_1 k30\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \quad (11)$$

Assume the following.

$$k2\_sin\_cos9 = k2\_partfun2 k1\_numbers k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers k30\_sin\_cos (k2\_rcomp\_1 k6\_numbers k32\_sin\_cos)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (13)$$

### Theorem 1

$$v6\_valued\_0 (k2\_partfun1 k1\_numbers k1\_numbers k2\_sin\_cos9 (k7\_relset\_1 k1\_numbers k1\_numbers k30\_sin\_cos (k2\_rcomp\_1 k6\_numbers k32\_sin\_cos)))$$