

t56\_sin\_cos9  
(TMZ9MrPLsjpGiMjytC5KeoCkM91BrFg9n7o)

October 27, 2020

Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_sin\_cos9 : \iota$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  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  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k6\_sin\_cos9 : \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k16\_sin\_cos : \iota$  be given. Let  $k2\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k30\_sin\_cos : \iota$  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  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} (k6\_sin\_cos9 (k1\_real\_1 np\_1) = k8\_real\_1 (k10\_real\_1 np\_3 np\_4) \\ k32\_sin\_cos) \wedge (k1\_seq\_1 k2\_sin\_cos9 (k1\_real\_1 np\_1) = k8\_real\_1 \\ (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) \end{aligned} \quad (1)$$

Assume the following.

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

Assume the following.

$$k10\_xtuple\_0 k16\_sin\_cos = k1\_rcomp\_1 (k1\_real\_1 np\_1) np\_1 \quad (3)$$

Assume the following.

$$\begin{aligned} k2\_partfun1 k1\_numbers k1\_numbers k2\_sin\_cos9 (k1\_rcomp\_1 (k1\_real\_1 \\ np\_1) np\_1) = k2\_partfun2 k1\_numbers k1\_numbers (k2\_partfun1 \\ k1\_numbers k1\_numbers k30\_sin\_cos (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos \\ np\_4) (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos))) \end{aligned} \quad (4)$$

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.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (8)$$

Assume the following.

$$v2\_funct\_1 (k2\_partfun1 k1\_numbers k1\_numbers k30\_sin\_cos (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos))) \quad (9)$$

Assume the following.

$$k1\_relset\_1 k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers k30\_sin\_cos (k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos))) = k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) \quad (10)$$

Assume the following.

$$(v1\_funct\_1 k30\_sin\_cos)\wedge(m1\_subset\_1 k30\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (11)$$

Assume the following.

$$(v1\_funct\_1 k2\_sin\_cos9)\wedge(m1\_subset\_1 k2\_sin\_cos9 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (12)$$

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.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (15)$$

**Theorem 1**

$$k2\_relset\_1 k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers k2\_sin\_cos9 (k1\_rcomp\_1 (k1\_real\_1 np\_1) np\_1)) = k1\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_4) (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos)$$