t25_sin_cos9 (TML-SWCc6EZ25Rgf25RyWbqFfBy5ctMSKP6p)

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Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_sin\_cos9 : \iota$ 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 $k2\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k29\_sin\_cos : \iota$ 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 $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_2 : \iota$ be given. Let $k31\_sin\_cos : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6\_xxreal\_2 : \iota \Rightarrow o$ be given. Let $v2\_membered : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$k2\_relset\_1\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k29\_sin\_cos\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))) = k1\_rcomp\_1\ (k1\_real\_1\ np\_\_1)\ np\_\_1 \tag{2}$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$((v2\_xxreal\_0\ np\_\_4)\wedge(m2\_subset\_1\ np\_\_4\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_4\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_4\ k1\_numbers)) \tag{5}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2)\wedge(m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_2\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{6}$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow(k2\_relset\_1\ X0\ X1 = k10\_xtuple\_0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(k2\_rcomp\_1\ X0\ X1 = k4\_xxreal\_1\ X0\ X1) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1\ X2)\wedge((v2\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow(k2\_partfun2\ X0\ X1\ X2 = k2\_funct\_1\ X2) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k1\_rcomp\_1\ X0\ X1 = k1\_xxreal\_1\ X0\ X1) \tag{12}$$

Assume the following.

$$k10\_real\_1\ k32\_sin\_cos\ np\_\_4 \in k2\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2) \tag{13}$$

Assume the following.

$$k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4) \in k2\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2) \tag{14}$$

Assume the following.

$$(v1\_relat\_1\ (k5\_relat\_1\ k29\_sin\_cos\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))))\wedge (v2\_funct\_1\ (k5\_relat\_1\ k29\_sin\_cos\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4)))) \tag{15}$$

Assume the following.

$$(v1\_relat\_1\ (k5\_relat\_1\ k29\_sin\_cos\ (k2\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))))\wedge (v2\_funct\_1\ (k5\_relat\_1\ k29\_sin\_cos\ (k2\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(v6\_xxreal\_2\ (k4\_xxreal\_1\ X0\ X1)) \tag{17}$$

Assume the following.

$$m1\_subset\_1\ k32\_sin\_cos\ k1\_numbers \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k2\_rcomp\_1\ X0\ X1)\ (k1\_zfmisc\_1\ k1\_numbers)) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((v1\_funct\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k2\_partfun1\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \tag{20}$$

Assume the following.

$$(v1\_funct\_1\ k29\_sin\_cos)\wedge(m1\_subset\_1\ k29\_sin\_cos\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))) \tag{21}$$

Assume the following.

$$(v1\_funct\_1\ k1\_sin\_cos9)\wedge(m1\_subset\_1\ k1\_sin\_cos9\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))) \tag{22}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(m1\_subset\_1\ (k1\_real\_1\ X0)\ k1\_numbers) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k10\_real\_1\ X0\ X1)\ k1\_numbers) \tag{24}$$

Assume the following.

$$k1\_sin\_cos9 = k2\_partfun2\ k1\_numbers\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k29\_sin\_cos\ (k2\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))) \tag{25}$$

Assume the following.

$$\forall X0.(v2\_membered\ X0)\Rightarrow((v6\_xxreal\_2\ X0)\Leftrightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow(((X1\in X0)\wedge(X2\in X0))\Rightarrow(r1\_tarski\ (k1\_xxreal\_1\ X1\ X2)\ X0))))) \tag{26}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))\Rightarrow(v3\_membered\ X0) \tag{27}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{28}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v2\_membered\ X0) \tag{29}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{30}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{31}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{32}$$

Theorem 1

$$k2\_partfun1\ k1\_numbers\ k1\_numbers\ k1\_sin\_cos9\ (k1\_rcomp\_1\ (k1\_real\_1\ np\_\_1)\ np\_\_1) = k2\_partfun2\ k1\_numbers\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k29\_sin\_cos\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4)))$$