t55_sincos10 (TMWhRtZ8B63UMi7gsduf65Aanqxaxtv88xK)

October 27, 2020

Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k3\_sincos10 : \iota$ 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 $k2\_fdiff\_9 : \iota$ 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 $k1\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k2\_funct\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ 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 $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$k2\_partfun1\ k1\_numbers\ k1\_numbers\ k3\_sincos10\ (k1\_rcomp\_1\ (k1\_real\_1\ (k7\_square\_1\ np\_\_2))\ (k1\_real\_1\ np\_\_1)) = k2\_partfun2\ k1\_numbers\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k2\_fdiff\_9\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4)))) \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow ((v2\_funct\_1\ X0) \Rightarrow ((k3\_relat\_1\ X0\ (k2\_funct\_1\ X0) = k4\_relat\_1\ (k9\_xtuple\_0\ X0)) \wedge (k3\_relat\_1\ (k2\_funct\_1\ X0)\ X0 = k4\_relat\_1\ (k10\_xtuple\_0\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow(k2\_relset\_1\ X0\ X1 = k10\_xtuple\_0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_funct\_1\ X2)\wedge((v2\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow(k2\_partfun2\ X0\ X1\ X2 = k2\_funct\_1\ X2) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow(k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(k1\_partfun2\ X0\ X1 = k4\_relat\_1\ X1) \tag{7}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{8}$$

Assume the following.

$$(v1\_relat\_1\ (k5\_relat\_1\ k2\_fdiff\_9\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4)))))\wedge(v2\_funct\_1\ (k5\_relat\_1\ k2\_fdiff\_9\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4))))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow(m1\_subset\_1\ (k2\_relset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \tag{10}$$

Assume the following.

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

Assume the following.

$$(v1\_funct\_1\ k2\_fdiff\_9)\wedge(m1\_subset\_1\ k2\_fdiff\_9\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{13}$$

Theorem 1

$$k3\_relat\_1\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k3\_sincos10\ (k1\_rcomp\_1\ (k1\_real\_1\ (k7\_square\_1\ np\_\_2))\ (k1\_real\_1\ np\_\_1)))\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k2\_fdiff\_9\ (k1\_rcomp\_1\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2))\ (k1\_real\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_4)))) = k1\_partfun2\ k1\_numbers\ (k1\_rcomp\_1\ (k1\_real\_1\ (k7\_square\_1\ np\_\_2))\ (k1\_real\_1\ np\_\_1))$$