# l36_sincos10 (TMYAtU-AGv78ybEdGntyMWzhCyrczK2t15GM)

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Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k32\_sin\_cos : \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_fdiff\_9 : \iota$ be given. Let $k4\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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. 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.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (k2\_partfun1\ X0\ X1\ X2\ X3 = k5\_relat\_1\ X2\ X3) \tag{3}$$

Assume the following.

$$k2\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos = k1\_relset\_1\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k1\_fdiff\_9\ (k2\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos)) \tag{4}$$

Assume the following.

$$r1\_tarski\ (k2\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos)\ (k4\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos) \tag{5}$$

Assume the following.

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

Assume the following.

$$(v1\_funct\_1\ k1\_fdiff\_9)\wedge(m1\_subset\_1\ k1\_fdiff\_9\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{8}$$

**Theorem 1**

$$r1\_tarski\ (k2\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos)\ (k1\_relset\_1\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ (k2\_partfun1\ k1\_numbers\ k1\_numbers\ k1\_fdiff\_9\ (k4\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos))\ (k2\_rcomp\_1\ (k10\_real\_1\ k32\_sin\_cos\ np\_\_2)\ k32\_sin\_cos)))$$