

# l83\_sincos10

(TMLJRg6ewmwtxFbPzyrFhcWCezXKgU6BXc)

October 27, 2020

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  $k2\_fdiff.9 : \iota$  be given. Let  $k3\_rcomp.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real.1 : \iota \Rightarrow \iota$  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  $k6\_numbers : \iota$  be given. Let  $v1\_xreal.0 : \iota \Rightarrow o$  be given. Let  $k1\_seq.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple.0 : \iota \Rightarrow \iota$  be given. Let  $k5\_relat.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole.0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct.1 : \iota \Rightarrow o$  be given. Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  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  $v3\_valued.0 : \iota \Rightarrow o$  be given. Let  $v4\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat.1 X1) \Rightarrow (k9\_xtuple.0 (k5\_relat.1 X1 X0) = k3\_xboole.0 (k9\_xtuple.0 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat.1 X2) \wedge (v1\_funct.1 X2)) \Rightarrow ((X0 \in k9\_xtuple.0 (k5\_relat.1 X2 X1)) \Rightarrow (k1\_funct.1 (k5\_relat.1 X2 X1) X0 = k1\_funct.1 X2 X0)) \quad (2)$$

Assume the following.

$$r1\_tarski (k3\_rcomp.1 (k1\_real.1 (k10\_real.1 k32\_sin\_cos np.2)) k6\_numbers) (k1\_relset.1 k1\_numbers k2\_fdiff.9) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Rightarrow (k3\_xboole.0 X0 X1 = X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1\_funct.1 X2) \wedge (m1\_subset.1 X2 (k1\_zfmisc.1 (k2\_zfmisc.1 X0 X1)))) \Rightarrow (k2\_partfun1 X0 X1 X2 X3 = k5\_relat.1 X2 X3) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1)\wedge(v4\_relat\_1 X1 X0))\Rightarrow(k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((v1\_funct\_1 (k2\_partfun1 X0 X1 X2 X3))\wedge(m1\_subset\_1 (k2\_partfun1 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \quad (8)$$

Assume the following.

$$(v1\_funct\_1 k2\_fdiff\_9)\wedge(m1\_subset\_1 k2\_fdiff\_9 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k3\_xboole\_0 X0 X1 = k3\_xboole\_0 X1 X0 \quad (10)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v5\_relat\_1 X0 k1\_numbers))\Rightarrow((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (12)$$

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

$$(k1\_relset\_1 k1\_numbers (k2\_partfun1 k1\_numbers k1\_numbers k2\_fdiff\_9 (k3\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) k6\_numbers)) = k3\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) k6\_numbers)\wedge(\forall X0.(v1\_xreal\_0 X0)\Rightarrow((X0 \in k3\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) k6\_numbers)\Rightarrow(k1\_seq\_1 (k2\_partfun1 k1\_numbers k1\_numbers k2\_fdiff\_9 (k3\_rcomp\_1 (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2)) k6\_numbers)) X0 = k1\_seq\_1 k2\_fdiff\_9 X0)))$$