

l26\_sincos10 (TM-  
cukggW4x79QhdQNtHjgcRSgPAbDmEpMGu)

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Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $k4\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  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  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k3\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k31\_sin\_cos : \iota$  be given. Let  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_4) \wedge (m2\_subset\_1 \ np\_4 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_4 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_4 \ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_2) \wedge (m2\_subset\_1 \ np\_2 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_2 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_2 \ k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xxreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k4\_rcomp\_1 \ X0 \ X1 = k3\_xxreal\_1 \ X0 \ X1) \quad (4)$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 \ X0) \wedge (v1\_xxreal\_0 \ X1)) \Rightarrow (k1\_rcomp\_1 \ X0 \ X1 = k1\_xxreal\_1 \ X0 \ X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k10\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$(k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos \in k4\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_2) k32\_sin\_cos)\wedge(k32\_sin\_cos \in k4\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_2) k32\_sin\_cos) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(v1\_xreal\_0 (k7\_xcmplx\_0 X0 X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow(v6\_xxreal\_2 (k3\_xxreal\_1 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(m1\_subset\_1 (k8\_real\_1 X0 X1) k1\_numbers) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow(m1\_subset\_1 (k4\_rcomp\_1 X0 X1) (k1\_zfmisc\_1 k1\_numbers)) \quad (12)$$

Assume the following.

$$m1\_subset\_1 k32\_sin\_cos k1\_numbers \quad (13)$$

Assume the following.

$$v1\_xreal\_0 k31\_sin\_cos \quad (14)$$

Assume the following.

$$\forall X0.(v2\_membered X0)\Rightarrow((v6\_xxreal\_2 X0)\Leftrightarrow(\forall X1.(v1\_xxreal\_0 X1)\Rightarrow(\forall X2.(v1\_xxreal\_0 X2)\Rightarrow(((X1 \in X0)\wedge(X2 \in X0))\Rightarrow(r1\_tarski (k1\_xxreal\_1 X1 X2) X0)))))) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers)\wedge(v1\_xreal\_0 X1))\Rightarrow(k8\_real\_1 X0 X1 = k8\_real\_1 X1 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers))\Rightarrow(v3\_membered X0) \quad (17)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (18)$$

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(v2\_membered X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (20)$$

**Theorem 1**

$$r1\_tarski (k1\_rcomp\_1 (k8\_real\_1 (k10\_real\_1 np\_3 np\_4) k32\_sin\_cos) \\ k32\_sin\_cos) (k4\_rcomp\_1 (k10\_real\_1 k32\_sin\_cos np\_2) k32\_sin\_cos)$$