

## t29\_sin\_cos

(TMJQ1q8Xw4hZJHMTY3QPNgzzpkj1ksfwxRn)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k20\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k17\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_square\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $k16\_sin\_cos : \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 np\_1 X0 = X0) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow & ((k7\_real\_1 (k5\_square\_1 (k1\_seq\_1 \\ & k19\_sin\_cos X0)) (k5\_square\_1 (k1\_seq\_1 k16\_sin\_cos X0)) = np\_1) \wedge \\ & (k7\_real\_1 (k8\_real\_1 (k1\_seq\_1 k19\_sin\_cos X0) (k1\_seq\_1 k19\_sin\_cos \\ & X0)) (k8\_real\_1 (k1\_seq\_1 k16\_sin\_cos X0) (k1\_seq\_1 k16\_sin\_cos \\ & X0)) = np\_1)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k8\_real\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (k7\_real\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k20\_sin\_cos X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k17\_sin\_cos X0)) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k3\_square\_1 X0)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k8\_real\_1 X0 X1) k1\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_square\_1 X0 = k3\_xcmplx\_0 X0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k20\_sin\_cos X0 = k1\_seq\_1 k19\_sin\_cos X0) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k17\_sin\_cos X0 = k1\_seq\_1 k16\_sin\_cos X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (13)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((k2\_xcmplx\_0 (k3\_square\_1 (k20\_sin\_cos X0)) (k3\_square\_1 (k17\_sin\_cos X0))) = np\_1) \wedge (k2\_xcmplx\_0 (k3\_xcmplx\_0 (k20\_sin\_cos X0) (k20\_sin\_cos X0)) (k3\_xcmplx\_0 (k17\_sin\_cos X0) (k17\_sin\_cos X0))) = np\_1))$$