

t1\_sin\_cos4  
(TMHqCbEuaN6PdCyP882h23478ukdFVE2sYM)

October 27, 2020

Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_sin\_cos4 : \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k21\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k18\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k20\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k17\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow & ((k21\_sin\_cos k6\_numbers = np\_1) \wedge \\ & ((k18\_sin\_cos k6\_numbers = k6\_numbers) \wedge ((k20\_sin\_cos (k4\_xcmplx\_0 \\ & X0) = k20\_sin\_cos X0) \wedge (k17\_sin\_cos (k4\_xcmplx\_0 X0) = k4\_xcmplx\_0 \\ & (k17\_sin\_cos X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (k4\_xcmplx\_0 (k7\_xcmplx\_0 X0 X1) = k7\_xcmplx\_0 (k4\_xcmplx\_0 X0) X1)) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k20\_sin\_cos X0)) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k17\_sin\_cos X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k1\_sin\_cos4 X0 = k7\_xcmplx\_0 (k17\_sin\_cos X0) (k20\_sin\_cos X0)) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \tag{7}$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k1\_sin\_cos4 (k4\_xcmplx\_0 X0) = k4\_xcmplx\_0 (k1\_sin\_cos4 X0))$$