

t7\_sin\_cos6  
(TMHqKSyk42QJ91n7xubH2ZtsroZcrnag7n4)

October 27, 2020

Let  $k18\_sin\_cos : \iota \Rightarrow \iota$  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  $np\_1 : \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_sin\_cos : \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  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. Let  $k17\_sin\_cos : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& (k1\_seq\_1 \ k19\_sin\_cos \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2) = k6\_numbers) \wedge \\
& \quad ((k1\_seq\_1 \ k16\_sin\_cos \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2) = np\_1) \wedge \\
& \quad ((k1\_seq\_1 \ k19\_sin\_cos \ k32\_sin\_cos = k1\_real\_1 \ np\_1) \wedge ((k1\_seq\_1 \ k16\_sin\_cos \ k32\_sin\_cos = k6\_numbers) \wedge ((k1\_seq\_1 \ k19\_sin\_cos \\
& \quad (k7\_real\_1 \ k32\_sin\_cos \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2)) = k6\_numbers) \wedge \\
& \quad ((k1\_seq\_1 \ k16\_sin\_cos \ (k7\_real\_1 \ k32\_sin\_cos \ (k10\_real\_1 \ k32\_sin\_cos \\
& \quad np\_2)) = k1\_real\_1 \ np\_1) \wedge ((k1\_seq\_1 \ k19\_sin\_cos \ (k8\_real\_1 \\
& \quad np\_2 \ k32\_sin\_cos) = np\_1) \wedge (k1\_seq\_1 \ k16\_sin\_cos \ (k8\_real\_1 \\
& \quad np\_2 \ k32\_sin\_cos) = k6\_numbers))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v1\_xreal\_0 \ X0) \Rightarrow ((k1\_seq\_1 \ k19\_sin\_cos \ k6\_numbers = \\
& \quad np\_1) \wedge ((k1\_seq\_1 \ k16\_sin\_cos \ k6\_numbers = k6\_numbers) \wedge ((k1\_seq\_1 \\
& \quad k19\_sin\_cos \ (k4\_xcmplx\_0 \ X0) = k1\_seq\_1 \ k19\_sin\_cos \ X0) \wedge (k1\_seq\_1 \\
& \quad k16\_sin\_cos \ (k4\_xcmplx\_0 \ X0) = k1\_real\_1 \ (k1\_seq\_1 \ k16\_sin\_cos \\
& \quad X0))))
\end{aligned} \tag{2}$$

Assume the following.

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

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (k1\_real\_1 \ X0 = k4\_xcmplx\_0 \ X0) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k18\_sin\_cos X0 = k17\_sin\_cos X0) \quad (5)$$

Assume the following.

$$m1\_subset\_1 k32\_sin\_cos k1\_numbers \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (m1\_subset\_1 (k1\_real\_1 X0) k1\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k10\_real\_1 X0 X1) k1\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (k17\_sin\_cos X0 = k1\_seq\_1 k16\_sin\_cos X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (10)$$

**Theorem 1**

$$(k18\_sin\_cos (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) = k1\_real\_1 np\_1 \wedge (k1\_seq\_1 k16\_sin\_cos (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) = k1\_real\_1 np\_1$$