

t33\_sin\_cos6 (TMJvho-  
jbXy2pQ4NPVEZnXHXRdBWvnrY3pr7)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  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  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k17\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k16\_sin\_cos : \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  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  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned}
& (\neg r1\_xxreal\_0 (k10\_real\_1 k32\_sin\_cos np\_2) k6\_numbers) \wedge (( \\
& \neg r1\_xxreal\_0 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge (( \\
& \neg r1\_xxreal\_0 k32\_sin\_cos k6\_numbers) \wedge ((\neg r1\_xxreal\_0 (k10\_real\_1 \\
& k32\_sin\_cos np\_2) (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge \\
& ((\neg r1\_xxreal\_0 (k8\_real\_1 np\_2 k32\_sin\_cos) k32\_sin\_cos) \wedge ( \\
& (\neg r1\_xxreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) \\
& (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge ((\neg r1\_xxreal\_0 k6\_numbers ( \\
& k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge ((\neg r1\_xxreal\_0 ( \\
& k8\_real\_1 np\_2 k32\_sin\_cos) k6\_numbers) \wedge ((\neg r1\_xxreal\_0 (k8\_real\_1 \\
& (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) k32\_sin\_cos) \wedge ((\neg r1\_xxreal\_0 \\
& (k8\_real\_1 np\_2 k32\_sin\_cos) (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& k32\_sin\_cos)) \wedge (\neg r1\_xxreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& k32\_sin\_cos) k6\_numbers)))))))))
\end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (r1\_xxreal\_0 (k17\_sin\_cos X0) np\_1) \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\
& (v1\_xxreal\_0 X2) \Rightarrow (((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X2)) \Rightarrow \\
& (r1\_xxreal\_0 X0 X2))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \wedge (( \\
& r1\_xxreal\_0 X0 (k8\_real\_1 np\_2 k32\_sin\_cos)) \wedge (k17\_sin\_cos X0 = \\
& np\_1))) \Rightarrow (X0 = k10\_real\_1 k32\_sin\_cos np\_2))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\
& (r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\
& ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\
& ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.((m1\_subset\_1 X0 k1\_numbers) \wedge (v1\_xxreal\_0 \\
& X1)) \Rightarrow (k10\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1)
\end{aligned} \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(v1\_xreal\_0 (k7\_xcmplx\_0 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xreal\_0 (k17\_sin\_cos X0)) \quad (11)$$

Assume the following.

$$m1\_subset\_1 k32\_sin\_cos k1\_numbers \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(k17\_sin\_cos X0 = k1\_seq\_1 k16\_sin\_cos X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow((r1\_xxreal\_0 X0 X1)\vee(r1\_xxreal\_0 X1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (16)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(\neg(\neg(r1\_xxreal\_0 X0 (k10\_real\_1 k32\_sin\_cos np\_2))\wedge((r1\_xxreal\_0 X0 (k8\_real\_1 np\_2 k32\_sin\_cos))\wedge(r1\_xxreal\_0 np\_1 (k17\_sin\_cos X0))))))$$