

## t36\_sin\_cos6

(TMXNtzJgtgRHBnjggPM29VVjMRJik7JaALB)

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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  $k32\_sin\_cos : \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k20\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k21\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k18\_sin\_cos : \iota \Rightarrow \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k17\_sin\_cos : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & (k21\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = k6\_numbers) \wedge ( \\
 & k18\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = np\_1) \wedge ((k21\_sin\_cos \\
 & k32\_sin\_cos = k1\_real\_1 np\_1) \wedge ((k18\_sin\_cos k32\_sin\_cos = k6\_numbers) \wedge \\
 & ((k21\_sin\_cos (k7\_real\_1 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos \\
 & np\_2)) = k6\_numbers) \wedge ((k18\_sin\_cos (k7\_real\_1 k32\_sin\_cos ( \\
 & k10\_real\_1 k32\_sin\_cos np\_2)) = k1\_real\_1 np\_1) \wedge ((k21\_sin\_cos \\
 & (k8\_real\_1 np\_2 k32\_sin\_cos) = np\_1) \wedge (k18\_sin\_cos (k8\_real\_1 \\
 & np\_2 k32\_sin\_cos) = k6\_numbers))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (r1\_xxreal\_0 (k1\_real\_1 np\_1) (k20\_sin\_cos X0)) \tag{2}$$

Assume the following.

$$\begin{aligned}
& (\neg r1\_xxreal\_0 (k10\_real\_1 k32\_sin\_cos np\_2) k6\_numbers) \wedge (( \\
& \quad \neg r1\_xxreal\_0 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge (( \\
& \neg r1\_xxreal\_0 k32\_sin\_cos k6\_numbers) \wedge ((\neg r1\_xxreal\_0 (k10\_real\_1 \\
& \quad k32\_sin\_cos np\_2) (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge \\
& \quad ((\neg r1\_xxreal\_0 (k8\_real\_1 np\_2 k32\_sin\_cos) k32\_sin\_cos) \wedge ( \\
& \quad (\neg r1\_xxreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) \\
& \quad (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge ((\neg r1\_xxreal\_0 k6\_numbers ( \\
& \quad k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge ((\neg r1\_xxreal\_0 ( \\
& \quad k8\_real\_1 np\_2 k32\_sin\_cos) k6\_numbers) \wedge ((\neg r1\_xxreal\_0 (k8\_real\_1 \\
& \quad (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) k32\_sin\_cos) \wedge ((\neg r1\_xxreal\_0 \\
& \quad (k8\_real\_1 np\_2 k32\_sin\_cos) (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& \quad k32\_sin\_cos)) \wedge (\neg r1\_xxreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& \quad k32\_sin\_cos) k6\_numbers))))))))))
\end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(v1\_xreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \wedge (( \\
& \quad r1\_xxreal\_0 X0 (k8\_real\_1 np\_2 k32\_sin\_cos)) \wedge (k20\_sin\_cos X0 = \\
& \quad k1\_real\_1 np\_1))) \Rightarrow (X0 = k32\_sin\_cos))
\end{aligned} \tag{5}$$

Assume the following.

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

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k21\_sin\_cos X0 = k20\_sin\_cos \\
& \quad X0)
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k18\_sin\_cos X0 = k17\_sin\_cos \\
& \quad X0)
\end{aligned} \tag{8}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k20\_sin\_cos X0)) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xreal\_0 (k17\_sin\_cos X0)) \tag{10}$$

Assume the following.

$$m1\_subset\_1 \ k32\_sin\_cos \ k1\_numbers \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 \ X0)\wedge(v1\_xxreal\_0 \ X1))\Rightarrow( \\ (r1\_xxreal\_0 \ X0 \ X1)\vee(r1\_xxreal\_0 \ X1 \ X0)) \quad (12)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k1\_numbers)\Rightarrow(v1\_xreal\_0 \ X0) \quad (14)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 \ X0)\Rightarrow(\neg(\neg r1\_xxreal\_0 \ X0 \ k32\_sin\_cos)\wedge \\ ((r1\_xxreal\_0 \ X0 \ (k8\_real\_1 \ np\_2 \ k32\_sin\_cos))\wedge(r1\_xxreal\_0 \\ (k20\_sin\_cos \ X0) \ (k1\_real\_1 \ np\_1))))$$