

## t93\_sin\_cos6

(TMV8Uy6R1PTmzXHoAT3r341rzSJXMWZTUgV)

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Let  $k6\_sin\_cos6 : \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k20\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k16\_sin\_cos : \iota$  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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k5\_sin\_cos6 : \iota \Rightarrow \iota$  be given. Let  $k31\_sin\_cos : \iota$  be given. Let  $k11\_arytm\_3 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \wedge (r1\_xxreal\_0 X0 k32\_sin\_cos)) \Rightarrow (k6\_sin\_cos6 (k20\_sin\_cos X0) = X0)) \quad (1)$$

Assume the following.

$$\begin{aligned} & (k1\_seq\_1 k19\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = k6\_numbers) \wedge \\ & ((k1\_seq\_1 k16\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = np\_1) \wedge \\ & ((k1\_seq\_1 k19\_sin\_cos k32\_sin\_cos = k1\_real\_1 np\_1) \wedge ((k1\_seq\_1 k16\_sin\_cos k32\_sin\_cos = k6\_numbers) \wedge ((k1\_seq\_1 k19\_sin\_cos \\ & (k7\_real\_1 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2)) = k6\_numbers) \wedge \\ & ((k1\_seq\_1 k16\_sin\_cos (k7\_real\_1 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos \\ & np\_2)) = k1\_real\_1 np\_1) \wedge ((k1\_seq\_1 k19\_sin\_cos (k8\_real\_1 \\ & np\_2 k32\_sin\_cos) = np\_1) \wedge (k1\_seq\_1 k16\_sin\_cos (k8\_real\_1 \\ & np\_2 k32\_sin\_cos) = k6\_numbers)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (3)$$

Assume the following.

$$\begin{aligned}
& (\neg r1\_xreal\_0 (k10\_real\_1 k32\_sin\_cos np\_2) k6\_numbers) \wedge (( \\
& \quad \neg r1\_xreal\_0 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge (( \\
& \neg r1\_xreal\_0 k32\_sin\_cos k6\_numbers) \wedge ((\neg r1\_xreal\_0 (k10\_real\_1 \\
& \quad k32\_sin\_cos np\_2) (k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge \\
& \quad ((\neg r1\_xreal\_0 (k8\_real\_1 np\_2 k32\_sin\_cos) k32\_sin\_cos) \wedge ( \\
& \quad (\neg r1\_xreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) \\
& \quad (k10\_real\_1 k32\_sin\_cos np\_2)) \wedge ((\neg r1\_xreal\_0 k6\_numbers ( \\
& \quad k1\_real\_1 (k10\_real\_1 k32\_sin\_cos np\_2))) \wedge ((\neg r1\_xreal\_0 ( \\
& \quad k8\_real\_1 np\_2 k32\_sin\_cos) k6\_numbers) \wedge ((\neg r1\_xreal\_0 (k8\_real\_1 \\
& \quad (k10\_real\_1 np\_3 np\_2) k32\_sin\_cos) k32\_sin\_cos) \wedge ((\neg r1\_xreal\_0 \\
& \quad (k8\_real\_1 np\_2 k32\_sin\_cos) (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& \quad k32\_sin\_cos)) \wedge (\neg r1\_xreal\_0 (k8\_real\_1 (k10\_real\_1 np\_3 np\_2) \\
& \quad k32\_sin\_cos) k6\_numbers))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$v1\_xboole\_0 np\_0 \tag{5}$$

Assume the following.

$$\forall X0. k6\_sin\_cos6 X0 = k5\_sin\_cos6 X0 \tag{6}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{7}$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \tag{8}$$

Assume the following.

$$k11\_arytm\_3 = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$\exists X0. (v1\_xboole\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X0))) \tag{10}$$

Assume the following.

$$v1\_xreal\_0 k31\_sin\_cos \tag{11}$$

Assume the following.

$$k1\_xboole\_0 = the (\lambda X0 : \iota. v1\_xboole\_0 X0) \tag{12}$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (k20\_sin\_cos X0 = k1\_seq\_1 k19\_sin\_cos X0) \tag{13}$$

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.

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

**Theorem 1**  $k6\_sin\_cos6 (k1\_real\_1 np\_1) = k32\_sin\_cos.$