

l85\_sin\_cos  
(TML12kxrZurZT2nCrt8882iofkzKBFC2V2k)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k24\_sin\_cos : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_series\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (k4\_series\_1 \\ (k4\_sin\_cos (k2\_xcmplx\_0 X0 X1)) = k8\_real\_1 (k4\_series\_1 (k4\_sin\_cos \\ X0)) (k4\_series\_1 (k4\_sin\_cos X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v1\_xreal\_0 \\ (k2\_xcmplx\_0 X0 X1)) \quad (2)$$

Assume the following.

$$\begin{aligned} (v1\_funct\_1 k24\_sin\_cos) \wedge ((v1\_funct\_2 k24\_sin\_cos k1\_numbers \\ k1\_numbers) \wedge (m1\_subset\_1 k24\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ k1\_numbers k1\_numbers)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k1\_numbers k1\_numbers) \wedge \\ (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \Rightarrow \\ ((X0 = k24\_sin\_cos) \Leftrightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (k1\_seq\_1 X0 \\ X1 = k4\_series\_1 (k4\_sin\_cos X1)))) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (k1\_seq\_1 \\ k24\_sin\_cos (k2\_xcmplx\_0 X0 X1) = k8\_real\_1 (k1\_seq\_1 k24\_sin\_cos \\ X0) (k1\_seq\_1 k24\_sin\_cos X1))) \end{aligned}$$