t36_sin_cos2 (TMY5oxaxGZm65Xo7MxVTQ8eXt2gWLRAw2dD)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r2\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_sin\_cos2 : \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $k1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k5\_square\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_sin\_cos2 : \iota$ be given. Let $v3\_rcomp\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_sin\_cos2 : \iota$ be given. Let $k2\_subset\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v3\_rcomp\_1\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \Rightarrow ((r2\_fdiff\_1\ X1\ X0) \Leftrightarrow ((r1\_tarski\ X0\ (k1\_relset\_1\ k1\_numbers\ X1)) \wedge (\forall X2.(m1\_subset\_1\ X2\ k1\_numbers) \Rightarrow ((X2 \in X0) \Rightarrow (r1\_fdiff\_1\ X1\ X2))))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow ((r1\_fdiff\_1\ k7\_sin\_cos2\ X0) \wedge (k1\_fdiff\_1\ k7\_sin\_cos2\ X0 = k10\_real\_1\ np\_\_1\ (k5\_square\_1\ (k1\_seq\_1\ k4\_sin\_cos2\ X0)))) \tag{2}$$

Assume the following.

$$(k1\_relset\_1\ k1\_numbers\ k1\_sin\_cos2 = k1\_numbers) \wedge ((k1\_relset\_1\ k1\_numbers\ k4\_sin\_cos2 = k1\_numbers) \wedge (k1\_relset\_1\ k1\_numbers\ k7\_sin\_cos2 = k1\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{4}$$

Assume the following.

$$v3\_rcomp\_1\ (k2\_subset\_1\ k1\_numbers) \tag{5}$$

Assume the following.

$$(v1\_funct\_1\ k7\_sin\_cos2)\wedge((v1\_funct\_2\ k7\_sin\_cos2\ k1\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ k7\_sin\_cos2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_numbers\ k1\_numbers)))) \tag{6}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k2\_subset\_1\ X0)\ (k1\_zfmisc\_1\ X0) \tag{7}$$

Assume the following.

$$\forall X0.k2\_subset\_1\ X0 = X0 \tag{8}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{9}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((r2\_fdiff\_1\ k7\_sin\_cos2\ k1\_numbers)\wedge(k1\_fdiff\_1\ k7\_sin\_cos2\ X0 = k10\_real\_1\ np\_\_1\ (k5\_square\_1\ (k1\_seq\_1\ k4\_sin\_cos2\ X0))))$$